Lithotriptic, Diuretic and Antispasmodic activities of

NERUNJILMUL CHOORANAM

&

VIRAHLMEEN THALAIKAL PARPAM

(DISSERTATION SUBJECT)

For the partial fulfillment of requirements to the Degree of

DOCTOR OF MEDICINE (SIDDHA)

(GUNAPADAM BRANCH)

GOVERNMENT SIDDHA MEDICAL COLLEGE

Tirunelveli – 627002

(Affiliated to the Tamilnadu Dr.M.G.R. Medical University, Chennai)

SEPTEMBER – 2008

CERTIFICATE

Certified that I have gone through the dissertation submitted by **Dr.V.Sreedevi**, **(Reg No : 32051508)** a student of final M.D.(S) Branch II-Gunapadam of this college and the dissertation work has been carried out by the individual only. This dissertation does not represent or reproduce the dissertation submitted and approved earlier.

Place : Palayamkottai.
Date :

Head of the Department
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INTRODUCTION

Lord Shiva, imbibed this divine medicine (Siddha) to Parvathi Devi and she told to Nandhi deva who spread this to Dhanvantri and his disciples.

Siddha treatment is based on humoral pathology i.e., air, bile, and phlegm (Vatha, Pitha, Kaba) which are the three main compositions of the body. When these humours get deranged, diseases result.

Siddha Medicine is based on the basic principles of nature. It is purely associated with spiritualism and philosophy, and as such is evendetly based on Truth. The aim of the Siddha Medicine is not to drive away the diseases temporarily but give refined permanent cure in a natural way.

Siddha system lays great emphasis on the preventive and dietary methods during illness. Medicines are of two kinds.

i. Promotion of vigour in the healthy.

ii. Cure diseases in the sick.

It is really astonishing to note how Siddhars without the advantages of modern equipments or tests observed the secrets of life so accurately and gave very good remedies.

Modern science has drugs which have diuretic action but they do not dissolve renal calculi. The test drug Nerunjil mul is not only a diuretic but

also has lithotriptic action. It crushes the stone into small particles and expels out in the urine.

Nerunjil is one of the drugs of Sirupanjamoolam (சிறுபஞ்ச மூலம் - கண்டங்கத்திரி, சிறுவழுதுணை, சிறுமல்லி, பெருமல்லி, நெருஞ்சில்) Nerunjilmul is a commonly available drug and its efficacy in kalladaippu noi is analyzed in this project work.

AIM AND OBJECTIVE

The aim of the dissertation is to establish the drug Nerunjilmul as an effective remedy for the disease Kalladaippu (Renal calculi).

The number of patients attending Govt. Siddha Medical College Hospital, Palayamkottai, seeking treatment for Kalladaippu is increasing day by day. So the author aimed at finding a cost effective and result oriented drug for the disease Kalladaippu.

When the author was reading the text ‘Pathaartha Guna Vilakkam’ the following lines impressed her.

நெருஞ்சில் வித்து

"சொல்லொண்ணா நீர்க்கட்டு துன்மா மிசமருகல்
கல்லடைப்பெ னும்பிணிகள் கண்டக்கால் - வல்லக்
கருஞ்சினவேற் கண்மாதே காசினிக்குள் நல்ல
நெருஞ்சி நறும் வித்தை நினை."

"மேக வழலாற்றும் மேவு நீர்க் கட்டறுக்கும்
போக மதிலின்பமே பூரிக்கும் - மோகமிக
உண்டாக்கும் மெல்லியர் பால் ஓது நெருஞ்சில்முள்
கொண்டார்க்கிங் கிக்குணத்தைக் கூறு".

The author was immensely impressed by verse which revealed that Nerunjilmul relieves the disease kalladaippu. All though the drug has got

strong literary evidences, the efficacy has not been proved by scientific therapeutic parameters. Therefore the author had selected this for her project.

Nerunjilmul is easily available and commonly known. In folklore medicine also, decoction and powder of fruits is given to cure calculus.

So the author has justified evaluation of “Nerunjil mul” in the following aspects.

1. Botanical aspect
2. Gunapadam aspect
3. Biochemical analysis
4. Pharmacological analysis
5. Anti Microbial study
6. Clinical assessment
7. Bio statistical analysis

REVIEW OF LITERATURE

BOTANICAL ASPECT

Tamil Name : நெருஞ்சில்

Botanical Name : Tribulus terrestris

Taxonomy Classification

Kingdom	-	Plantae (Plants)
Subkingdom	-	Tracheobiosta (Vascular plants)
Division	-	Spermatophyta (Seed plants)
Sub division	-	Angiospermae
Class	-	Dicotyledonae
Sub class	-	Polypetalae
Series	-	Disciflorae
Order	-	Geraniales
Family	-	Zygophyllaceae
Genus	-	Tribulus
Species	-	terrestris
	-	Benthem and Hooker

Family:

Genera 22, species 160, Xero and halophytes of tropical and subtropical regions.

Genus

A genus of ascending or prostrate herbs, commonly known as **Caltrops,** distributed in the tropics, and warm-temperate regions of the world.

Important botanical features of Tribulus terrestris, linn.

The following are the important botanical features mentioned in “The Wealth of India,” Vol X Page no. 283.

Morphological Characters:

A variable, prostrate annual, upto 90cm in length, commonly found throughout India. The herb is a common weed, springing up everywhere soon after the first showers. The herb flowers and fruits almost throughout the year. Leaves paripinnate, leaflets 5-8 pairs, subequal, oblong to linear oblong, flowers leaf opposed, solitary, pale yellow to yellow, flowering starts with in 20-35 days, fruits globose spinous or tuberculate consisting of 5-12 woody cocci, each with 2 pairs of hard, sharp, divaricate spines, one pair longer than the other, seeds several in each coccus with transverse partitions between them. Fruits matures in 14 days after the formation of seeds. Roots slender, cylindrical, fibrous 10-15cm long, light brown and faintly aromatic.

Habitat:

This trailing plant is common in sandy soil throughout India and Ceylon, plentiful in the United Provinces and in Madras.

Action and uses of Tribulus terrestris

Plant and dried spiny fruit are esteemed as cooling, demulcent, diuretic, tonic and aphrodisiac. “The diuretic properties of the plant, no doubt, are due to the large quantities of the nitrates present as well as the essential oil which occurs in the seeds”.

- Nadkarni’s Indian Materia Medica

Vol.I Page no. 1229

The fruits are credited with diuretic and tonic properties and are used for the treatment of calculus affections and painful micturition.

- The Wealth of India – Vol X

Page no. – 283

The fruit and root are sweetish, cooling, tonic, fattening, aphrodisiac, alternative, improve appetite, useful in strangury, urinary discharges, vesicular calculi, pruritis ani, alleviate burning sensation, reduce inflammation, remove “tridosha”, cough, asthma, pain, cure skin and heart disease, piles, leprosy.

The seeds are cooling, fattening, diuretic, aphrodisiac, removes inflammation, urinary troubles, stones in the bladder.

The fruit is sour with a bad taste, diuretic, removes gravel from the urine and stone in the bladder.

The fruits are regarded as cooling, diuretic, tonic and aphrodisiac and are used in painful-micturition, calculus affections, urinary disorders and impotence.

In Southern India, the fruit is highly valued as a diuretic. In many cases where this has been tried, the result was quite perceptible in the increase of the urinary secretion.

- Indian Medicinal plants part.I

Kirtikar & Basu Page no. 419

Action and uses in Ayurvedha and Siddha

Mathura rasam, Seetha veeryam, mootralam, Vrishyam, dipanam, balakaram, pustikaram, in asmari, prameham, arsas, krichram, swasakasam, hridrogam.

Action and uses in Unani

Murakabul Khuva, diuretic, aphrodisiac, increases semen, removes stones, caused nugi in madda, in colic due to heat.

Uses:

Plant and dried spiny fruits are used in decoction or infusion in cases of spermatorrhoea, phosphaturia, diseases of the genito urinary system such as dysuria, gonorrhoea, gleet, chronic cystitis, calculus affections, urinary

disorders, incontinence of urine, gout and impotence, also in uterine disorders after parturition and to ensure fecundity.

The fruits also form an ingredient in medicines for urinary disorders and impotence and are one of ingredients of the **"Dasamulakvatha".**

A compound powder called **"Gokhsuradi churnam"** is popular in all urinary diseases. It is made up of

Tribulus terrestris	- 9 tolas (108 grams)
Cubebs	- 3 tolas (36 grams)
Mesua ferrea	- 3 tolas (36 grams)
Rhee radix	- 3 tolas (36 grams)
Pottasium nitrate	- 3 tolas (36 grams)

Powdered and mixed

Dose: 10-20 grains (650mg – 1.3 gram)

- Nadkarni's Indian Materia Medica Vol. I , Page no. 1229

Tribulus terrestris in Folklores:

The decoction or powder of seeds is given in calculi and sexual weakness.

- Medicinal plants and Folklores Page no. 34.

By V.K. singh & ABRAR M. Khan

PHYTOCHEMISTRY

The fruit contains

- An alkaloid in traces (0.001%)
- A fixed oil 3.5%, consisting mainly of unsaturated acids.
- An essential oil in very small quantities
- Resins and
- Fair amount of nitrates.

- Nadkarni's Indian Materia Medica

Vol.I Page no. 1229

The fruit contains alkaloids, resins, and a fixed oil (3.5 – 5% consisting mainly of unsaturated acids) tannins, reducing sugars, sterols, an essential oil, nitrates, peroxidase, (stable below 50^0C) diastase and traces of a glucoside.

- The Wealth of India Vol. X Page no. 283

GUNAPADAM ASPECT

நெருஞ்சில்

வேறுபெயர்கள்:

திரிகண்டம், திரிகண்டகம், திரிதண்டம், நெருஞ்சிபுதும்,

அசுவசட்டிரம், சுவதட்டம், கோகண்டம், காமரசி,

சுவாது கண்டம், கிட்டிரம், கோண்டம், சுதம்.

Vernacular Names:

Eng	:	Small caltrops
		Land caltrops
		Puncture vine
Tel	:	Palleru
San	:	Gokshura
Hind	:	Gakhru
Mal	:	Nerunji

- குணபாடம் மூலிகை வகுப்பு

Page no. 595

Arab	:	Khara - Khusk
Ben	:	Gokhuri
Can Kan	:	Negil-mullu
Eng	:	Small caltrops
Gwalior Hindi	:	Chota gokhru

Mal	:	Nerungil, Nerinnil
Punj	:	Kurkundai
Sans	:	Jkshugandha ; Gokshura ; Trikantah
Sinh	:	Trimen ; Sambunerinchi
Tam	:	Cherunerinche; Nerinji ; Nerinjal
Tal	:	Pallerumullu, Nirunji

- Nadkarni's Indian Materia Medica Vol. I

Page no. 1229

Ben & Oriya	:	Gakhura, gokshra
Guj	:	Betagokhru, mithagokhru, naganagokhru
Hindi	:	Gokhru
Kan	:	Sanna neggilu
Ladakh	:	Rasha, Kokulla
Mar	:	Lahangokhru, Sarala, Sharatte
Punjab	:	Lotak ; bakhra
Rajasthan	:	Gokhatri; gokhru – bara; kanti; kohru – desi
Sans	:	Gokshura; ikshugandha
Tam – mal	:	Nerunji; Nerunjeckai (fruits)
Tel	:	Chinni palleru: Chiru – palleru;
		Palleru – kayalu (fruits)

- The Wealth of India. Vol.X Page no. 283

பயன்படும் உறுப்பு:

செடி முழுமையும் (Whole plant), விதை

- குணபாடம் மூலிகை வகுப்பு

Fruit and Root, especially the entire plant is used.

- Nadkarni’s Materia medica

Organoleptic Characters:

சுவை	**:**	**துவர்ப்பு, இனிப்பு**
தன்மை	**:**	**சீதம்**
பிரிவு	**:**	**இனிப்பு**

Therapeutic actions:

Plant and dried spiny fruit

Cooling	-	**குளிர்ச்சியுண்டாக்கி**
Demulcent	-	**உள்ளழலாற்றி**
Diuretic	-	**சிறுநீர்ப் பெருக்கி**
Aphrodisiac	-	**ஆண்மைப் பெருக்கி**
Tonic	-	**உரமாக்கி**

Stem:

Astringent

Therapeutic effects of the plant Nerunjil is explained as follows:

"நல்ல நெருஞ்சிலது நாளுங்கி ரிச்சரத்தை
வல்ல சுரமனலைமாற்றுங்காண்- மெல்லியலே
மாநிலத்தில் கல்லடைப்பும் வாங்காத நீர்க்கட்டும்
கூனுறுமெய் வாதமும் போக் கும்"

- அகத்தியர் குணவாகடம்

"மேகவெட்டை நீர்ச்சுருக்கு வீறுதிரி தோடம்புண்
வேகாசுர தாகவெப்பம் விட்டொழியும்- போகந்
தருஞ்சின மதலைமொழித் தையலே நல்ல
நெருஞ்சி லதனை நினை"

- அகத்தியர் குணவாகடம்

பொருள்:

இதனால் சொட்டுநீர், சுரவெதும்பல், கல்லடைப்பு, நீரடைப்பு, முடவாயு, வெள்ளை, சிறுநீர் எரிச்சல், முக்குற்றம், நீர்வேட்கை, வெப்பம் ஆகியவை நீங்கும்.

நெருஞ்சில் வித்து (விதை)

"சொல்லொண்ணா நீர்க்கட்டு துன்மா மிசமருகல்
கல்லடைப்பெ னும்பிணிகள் கண்டக்கால்- வல்லக்
கருஞ்சினவேற் கண்மாதே காசினிக்குள் நல்ல
நெருஞ்சிநறும் வித்தை நினை"

- பதார்த்த குணவிளக்கம் - 442

பொருள்:

இதனால் சிறுநீர்க்கட்டு, சிறுநீர் எரிச்சல், சதையடைப்பு, கல்லடைப்பு ஆகியவை நீங்கும்.

"மேக வழலாற்றும் மேவு நீர்க்கட்டறுக்கும்
போகமதி லின்பமுமே பூரிக்கும்- மோகமிக
உண்டாக்கும் மெல்லியர்பால் ஓது நெருஞ்சில் முள்
கொண்டார்க்கிங் கிக்குணத்தைக் கூறு".

- பதார்த்த குணவிளக்கம் - 442

பொருள்:

நெருஞ்சில் வித்தால் மேகஅனல், நீர்க்கட்டு முதலியன நீங்கும் இணைவிழைச்சில் புத்தி அதிகமாகச் செல்லும் என்க.

விதை:

நெருஞ்சில் வித்தைப் பசுவின்பாலில் போட்டு வேகவைத்து உலர்த்தி, இடித்துச் சூரணம் செய்து வைத்துக் கொண்டு, வேளைக்கு ¼ - ½ தோலா (3-6 கிராம்) எடை பசுவின் பாலில் போட்டு சர்க்கரை சேர்த்துத் தினம் 2 வேளை கொடுத்து வரத் தாது கட்டும். இளநீரில் போட்டுக் கொடுக்க நீர்க்கட்டு நீங்கும்.

- சுத்தி செய்த நெருஞ்சில் முள் சூரணம் - 9 தோலா (98 கிராம்)
  வால்மிளகு - 3 தோலா (36 கிராம்)
  சிறுநாகப்பூ - 3 தோலா (36 கிராம்)
  வெடியுப்பு - 3 தோலா (36 கிராம்)

இவைகளை இடித்துச் சூரணம் செய்து வைத்துக் கொண்டு வேளைக்கு 5-10 குன்றி எடை (650 மி.கி - 1.3 கிராம்) இளநீரில் கொடுத்துவரச் சிறுநீர் தாராளமாக இறங்கும்.

- பதார்த்த குணவிளக்கம் பக்கம் - 443

சிறுநெருஞ்சில் குடிநீர்

நசுக்கிய நெருஞ்சிக்காய்	- 68 கிராம்
கொத்துமல்லி விதை	- 68 கிராம்
நீர்	- 68 கிராம்

இவைகளை நேர் பாதியாய் சுண்ட வைத்து வடிகட்டவும்.

அளவு - 40 மி.லி இருவேளை

தீரும் நோய் - நீரடைப்பு, சதையடைப்பு, கல்லடைப்பு, நீர்எரிச்சல்

- குணபாடம் மூலிகை வகுப்பு

கல்லடைப்பு குடிநீர்

பனங்குருத்து, நெருஞ்சில், நீர்முள்ளி, சூரைவேர், காஞ்சொறிவேர், வில்வவேர், குரோசாணி ஓமம், நீர்க்கடம்பின் வேர் இவைகளை ஓர் அளவாய்க் கொண்டு முறைப்படி குடிநீராக்கிக் கொள்ளவும்.

அளவு - 1 ஆழாக்கு (168 மி.லி)

தீரும் நோய்- கல்லடைப்பு

- சித்த மருத்துவம் பக்கம் 444

"கக்குஞ் சிறுபீளை காஞ் நெருஞ்சில் மாவிலிங்கை

விக்கும் பேராமுட்டி வேருடனே- யொக்கவே

கூட்டிக் கியாழமிட்டுக் கொள்ளவே கல்லடைப்புக்

காட்டிக் கழன்றோருங் காண்"

சிறுபீளை சமூலம், மாவிலங்க வேர், பேராமுட்டி வேர் இவைகளை ஓரெடை எடுத்து போதிய நீர் விட்டு முறைப்படி எட்டில் ஒன்றாகக் குறுக்கிக் குடிநீர் செய்து வடிகட்டிப் பருக, கல்லடைப்பு தீரும். நீரடைப்பு நீங்கி நீரிழியும்.

குறிப்பு:

மேற்கூறிய குடிநீரை வெங்காரம், சீனாக்காரம், வெடியுப்பு, சிலாசத்து, கல்நார், நண்டுக்கல், விரால் மீன் தலைக்கல் இவைகளின் பற்பத்திற்கு துணைமருந்தாக கூட்டினால் கல்லடைப்பு நீங்கும்.

- குணபாடம் மூலிகை வகுப்பு பக்கம் - 686

குங்குமப்பூ லேகியம்

செய்முறை :

குங்குமப்பூ, வெள்ளரிப்பழ விதை, சாதிக்காய், கிராம்பு, லவங்கப்பட்டை, கசகசா, ஏலம், லவங்கப்பத்திரி, சாதிப்பத்திரி, நீர்முள்ளிவேர், நிலப்பனைக் கிழங்கு, கற்றாழை வேர், கசப்பு நெருஞ்சி வித்து, கொடி மாதுளம் வித்து, ஆனை நெருஞ்சி வித்து, துளசி வித்து, நெல்லிக்காய் வித்து, திப்பிலி, அதிவிடயம், கடுக்காய், சுக்கு, நறுவிலிப்பழம், தான்றிக்காய், கூகைநீறு, மிளகு, கோதுமை மாவு, வாதுமைப்பருப்பு, கஞ்சாவித்து, அதிமதுரம், சடாமாஞ்சில், தேத்தான் கொட்டை, கடுகுரோகிணி இவைகள் அனைத்தும் வகைக்கு - 1 பலம் (35 கிராம்).

ரோஜா மொட்டு -5 பலம் (175 கிராம்)

இவைகளை உலர்த்திச் சூரணித்து, அத்துடன் அப்பிரகச் செந்தூரம் ¼ பலம் (8.75 கிராம்)சேர்த்துக் கொள்க. 5 பலம் (175 கிராம்) கற்கண்டுப் பொடியை ¼ படி (375 மி.லி) பசுவின் பாலிலிட்டு பாகு செய்து அதில் மேற்படி சூரணத்தைப் போட்டு பிறகு நெய் ¼ படி (375 மி.லி) விட்டு கிண்டி லேகியமாக்கிக் கொள்ளவும்.

அளவு : 5கிராம், இருவேளை

தீரும் நோய்

மேகநீர், வெள்ளை, வெட்டை, நீர்அடைப்பு, நீர்க்கடுப்பு, சதையடைப்பு, கல்லடைப்பு, மது மூத்திரம், நீரிழிவு, ரத்தப் பிரமேகம், பெரும்பாடு, குஷ்டம், கிரந்தி, சூலை, கிறுகிறுப்பு, கை கால் எரிவு, பித்த வெட்டை, மேகம், அஸ்திசுரம், அரையாப்பு, மலடுரோகம் தீரும்.

- பிராணரக்ஷாமிர்த சிந்து - 2வது பாகம்

நெருஞ்சில் லேகியம்

நெருஞ்சில் -12 ½ சேர் (3.5 கீ.கிராம்)

நீர் - 64 சேர் (17.92 கீ.கிராம்)

இவற்றை நாலிலொன்றாகக் காய்ச்சி வடிகட்டி 6¼ சேர் (1.75 கீ.கிராம்) சர்க்கரை சேர்த்துக் காய்ச்சிப் பாகாக்கி அத்துடன், சுக்கு, மிளகு, திப்பலி, கருவாப்பட்டை வகைக்கு 16 தோலா (196 கிராம்), ஏலம், சிறுநாகப்பூ, சாதிக்காய், வெள்ளரிவிதை வகைக்க 16 தோலா (196 கிராம்).

மூங்கிலரிசி - ½ சேர் (140 கிராம்)

இவைகளை நன்றாய்ப் பொடித்து மேற்கூறிய பாகுடன் சேர்த்துக் கிளறி இலேகியமாக்கிக் கொள்ளவும்.

அளவு - 24 கிராம்

தீரும் நோய் -

சிறு நீர் எரிச்சல், நீரடைப்பு, சதையடைப்பு

- குணபாடம் மூலிகை வகுப்பு பக்கம் 596

நீர்- மலக்கட்டுக்கு நெரிஞ்சிமுள் சூரணம்

சிறு நெருஞ்சி முள்	-	3½ பலம் (122.5 கிராம்)
இரேவல் சின்னி	-	½ பலம் (17.5 கிராம்)
பொரித்த வெங்காரம்	-	½ பலம் (17.5 கிராம்)
வெடியுப்பு	-	½ பலம் (17.5 கிராம்)
சிறுநாகப்பூ	-	½ பலம் (17.5 கிராம்)
எவச்சாரம்	-	½ பலம் (17.5 கிராம்)
சுத்தித்த பூநீறு	-	½ பலம் (17.5 கிராம்)

செய்பாகம்

உப்புத் தினுசுகள் நீங்கலாக மற்றச் சரக்குகளை நன்றாய் இடித்துக் கல்வத்திலிட்டு உப்பு இனங்களைக் கூட்டி நன்கு அரைத்துச் சீசாவில் பத்திரப்படுத்துக.

பிரயோகம்

இந்தச் சூரணத்தைவேளைக்கு 5 முதல் 10 குன்றி எடை (650மி.கி - 1.3 கிராம்) தினம் 3 அல்லது 4 வேளை வெந்நீர், இளநீர் முதலியவற்றில் கொடுத்து வருக.

தீரும் வியாதி

நீர்க்கட்டு, நீர்எரிச்சல், நீர்க்கடுப்பு முதலியவைகள் போம். சிறுநீரை அளவுக்கு மிஞ்சி வெளிப்படுத்தும் வெள்ளை ரோகத்தில் இந்தச் சூரணத்தை முதலில் கொடுத்தால் குண்டிக்காய், மூத்திரப்பை, நீர்த்தாரை முதலியவற்றை சுத்தப்படுத்தி அங்குள்ள விரணங்களை ஆற்ற உதவி செய்யும். பின் வெள்ளைக்கு உரிய எந்த மருந்து கொடுத்தாலும் நற்பயனை அளிக்கும்.

பத்தியம்

காரசாரமில்லாத ஆகாரமே உட்கொள்ள வேண்டும். மோர்சாதம் உண்ணுதல் அதிக உத்தமம். நீரும், பாலும் கலந்து அடிக்கடி உட்கொண்டுவரின் அதிகமாக சிறுநீரை வெளிப்படுத்தும். நீரிலுள்ள வண்டல்கள் யாவும் வெளியேறும்.

- கண்ணுசாமிப் பரம்பரை வைத்தியம்

பக்கம் 110

பிரமேகப் பொதுமருந்து

நெருஞ்சிமுட்தூள் - 15 பலம் (525 கிராம்)

கருஞ்சீரகம் - 3 பலம் (105 கிராம்)

சீனிசர்க்கரை - 18 பலம் (630 கிராம்)

இவை எல்லாவற்றையும் ஒன்றாக கலந்து பீங்கான் பாத்திரத்தில் பத்திரப்படுத்தவும்.

அளவு 1 ½ -2 ½ வராகனெடை (6.3 - 10.5 கிராம்)

துணைமருந்து பசுநெய், பசுவெண்ணெய்

தீரும் நோய்

இதனை 40 நாள் உபயோகித்தால், எல்லாவகைப் பிரமேகங்கள், நீரடைப்பு, சதையடைப்பு, கல்லடைப்பு, கை கால் எரிவு, உட்டிணநோய்கள், எலும்புருக்கி நோய், குன்ம நோய் ஆகியவை நீங்கும்.

- அகத்தியர் பள்ளு - 200 பக்கம் 62

திரிகண்டகாதி சூரணம்

நெருஞ்சில் முள் சூரணத்தில் தேன், ஆட்டுப்பால் கலந்து 7 நாள் சாப்பிட்டால் கல்லடைப்பு நோய் குணமாகும்.

- அனுபவ வைத்திய தேவ ரகசியம்

4-ம் பாகம் பக்கம் 533

நெருஞ்சில் முள் சேரும் பிறநோய்க்கான மருந்துகள்

தாதுவிருத்திக்கு நிலப்பனைச் சூரணம்

நிலப்பனங்கிழங்கு	-	1 பலம் (35 கிராம்)
சீந்தில் சர்க்கரை	-	1 பலம் (35 கிராம்)
நெருஞ்சில் முள்	-	1 பலம் (35 கிராம்)
பெரும் பூனைக்காலி வித்து	-	1 பலம் (35 கிராம்)
நெல்லி வற்றல்	-	1 பலம் (35 கிராம்)
முள்ளிலவம் பிசின்	-	1 பலம் (35 கிராம்)
கற்கண்டு	-	1 பலம் (35 கிராம்)

செய்பாகம்

கற்கண்டையும், சீந்தில் சர்க்கரையையும் நீக்கி மற்ற 5 சரக்குகளையும் நன்றாய் உலர்த்தி நன்கு இடித்துச் சூரணம் செய்து கல்வத்திலிட்டு கற்கண்டையும், சீந்தில் சர்க்கரையையும் கூட்டி அரைத்து மிருதுவான பதத்தில் பத்திரப்படுத்துக.

பிரயோகம்

இந்தச் சூரணத்தில் வேளைக்குத் திரிகடிப் பிரமாணம் அந்தி சந்தி பாலில் கலந்தாவது அல்லது பசுவின் நெய்யில் கலந்தாவது அல்லது நெய்யில் மத்தித்தாவது சிலநாள் கொடுத்து வருக.

தீரும் வியாதி

தாதுபலவீனம், ஸ்திரிகளுக்குக் காணும் வெள்ளை, ஒழுங்கீனமான வீட்டு விலக்கு குணமாகும்.

பத்தியம்

இச்சா பத்தியம்.

MATERIALS AND METHODS

The drug was prepared with reference from “Anubhava vaithiya deva ragasiam” Vol . IV by Kannusamy pillai page 533

Collection of test drug

Nerunjil mul was purchased from a private raw drug store at Nagercoil.

Purification of the test drug

Foreign particles were removed from the collected Nerunjil mul and dried in shade.

Preparation of the test drug

The dried nerunjil fruits (Mul) were ground into a fine powder and sieved by a white cotton cloth.

Purification of Chooranam

A pot is taken with equal quantity of milk and water. The mouth of the pot is covered with cotton cloth. The chooranam is kept over it and covered with a lid and a moist cloth is wound tightly round the lid and the rim of the pot. The contents are boiled till steam escapes, which means chooranam is well cooked and purified. Then the chooranam was taken and dried then powdered. This Chooranam was used within 3 months of preparation.

Dose **:** 2 gm twice a day after food

Adjuvant **:** Honey

Route of admisistration : Enteral route (oral)

This prepared Nerunjimul chooranam was used for the following methods

- Biochemical analysis
- Pharmacological analysis
- Microbiological analysis
- Clinical studies.

BIO - CHEMICAL ANALYSIS

BIO - CHEMICAL ANALYSIS OF NERUNGIL MUL CHOORANAM

Preparation of the Extract

5gms of Chooranam was weighed accurately and placed in a 250ml clean beaker. Then 50ml distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made up to 100ml with distilled water. This fluid is taken for analysis

QUALITATIVE ANALYSIS

S. No	Experiment	Observation	Inference
1.	**Test for calcium** 2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.	No white precipitate is formed.	Absence of calcium.
2.	**Test for sulphate:** 2ml of the extract is added to 5% barium chloride solution.	A white precipitate is formed.	Indicates trace amount of **sulphate.**

3.	**Test for chloride** The extract is treated with silver nitrate solution.	No white precipitate is formed	Absence of chloride.
4.	**Test for carbonate** The substance is treated with concentrated Hcl.	No brisk effervescence is formed.	Absence of carbonate.
5.	**Test for Starch** The extract is added with weak iodine solution.	No blue colour is formed	Absence of starch.
6.	**Test for iron** **Ferric** The extract is treated with concentrated glacial acetic acid and potassium ferro cyanide.	No blue colour is formed.	Absence of ferric iron.
7.	**Test of iron :** **Ferrous:** The extract is treated with concentrated Nitric acid and ammonium thio cynate.	Blood red colour is formed.	Indicates the presence of **ferrous iron**.

8.	**Test for phosphate** The extract is treated with ammonium molybdate and concentrated nitric acid.	Yellow precipitate is formed.	Indicates trace amount of **phosphate**.
9.	**Test for albumin** The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of albumin.
10.	**Test for Tannic acid** The extract is treated with ferric chloride reagent.	No blue black precipitate is formed.	Absence of Tannic acid.
11.	**Test for unsaturation** Potassium permanganate solution is added to the extract.	It gets decolourised.	Indicate the presence of **unsaturated compound.**
12.	**Test for the reducing sugar** 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of reducing sugar.

13.	**<u>Test for amino acid:</u>** One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% ninhydrin is sprayed over the same and dried it well.	No Violet colour is formed.	Absence of amino acid.

INFERENCE

The given sample of Nerunjilmul chooranam contains ferrous iron, Chloride, trace amounts of sulphate and phosphate.

PHARMACOLOGICAL ANALYSIS

Lithotriptic action of Nerunjilmul

Aim

To evaluate the lithotriptic effect of Nerunjilmul.

Preparation of extract of Nerunjilmul

The dried materials were, pulverized by a mechanical grinder sieved through No. 40 mesh. The powdered materials were extracted with ethanol using soxhlet extraction apparatus. This Ethanol extract was then concentrated and dried under reduced pressure. The Ethanol free semisolid mass thus obtained was used for the experiment.

Preparation of the test drug

1 gm of ethanol extract of Nerunjilmul was dissolved in 10ml of distilled water, thus 1 ml contains 100mg of test drug.

Procedure

Groups of 24 inbred male albino rats of the Wistar strain (150-180gm) were fed standard pelleted diet and water was given ad libitum. They were acclimatized to the animal house conditions for a week. They were then divided into 4 groups comprising six animals in each. Group I received the commercial diet and served as controls. Group II was administered a calclui – producing diet (CPD) commercial diet mixed with 3% glycolic acid for 40

days (Chow et.al., 1974). Group III – IV received the commercial diet for 40 days with Nerunjilmul chooranam (100mg/kg & 200 mg/kg) respectively being administered during the last 20 days. The drugs were administered orally by stomach tube.

Collection and analysis of urine samples

On the day before being killed, the rats were housed in metabolic cages for 24hr urine collections. A drop of concentrated HCL was added to the urine before being stored at 4^{o} C. Urine samples were centrifuged and one drop of deposit was transferred using Pasteur pipette on to a glass slide. Size of the crystals in the three zones at random was measured by light microscope using calibrated eyepiece and micrometer (Eliotte et.al.,1980). Urine samples were tested spectrophotometrically to determine the contents of Calcium, Oxalate and Phosphate. The blood samples were tested to determine the urea and creatinine.

Histological Examination

The kidneys were isolated and homogenized with normal saline and estimated for the Calcium, Oxalate & Phosphate.

The Kidneys were fixed in 10% Normal saline, sectioned and stained with Haematoxylin & Eosin (Clayden, 1971). The Kidney specimens were

examined under light microscopy to evaluate glomerular damage, tubular dilatation and inflammation.

Urinary calcium, phosphate and oxalate content were found to be increased in the glycolic acid control group as compared to the solvent control. All these parameters were brought to near normal in the treated group when compared to the glycolic acid control. In our study it was noted the urinary output of the treated group increases as compared to the solvent control indication diuretic activity of the drugs which may also contribute in preventing the deposition of oxalate, calcium and phosphates.

Histological examination of kidneys showed tubular necrosis and damage in all the animals in the glycolic acid control group. The morphology of kidneys in the treatment group was almost normal indicating the protective effect of the drugs against ethylene glycol induced toxicity.

The result indicate the potential antiurolithiatic activity of the Nerunjilmul chooranam on glycolic acid induced urolithiasis.

Reference

Chow, FHC., Dysart, MI., Hamar, DW.and Udall, R.H.Invest Urol, 1975,13,113.

Clayden, EC., 1971 Practical section, cutting and staining, 5th ede, Chruchill Livingstone, Edinburgh.

Elliot, JS.and Rabinowitz, I N., Calcium oxalate crystalluria crystal size in urine, The Journal of urology, 1980, 123, 324-27.

Result and discussion

Urolithiasis is a condition where there is formation of stone in the urinary system, i.e., in the kidney, ureter, urinary bladder or in the urethra. Generally there are five different types of stones of which calcium oxalate is most common and calcium phosphate, magnesium, ammonium phosphate, cystine and uric acid stones. There are two varieties in calcium oxalate stone, i.e., monohydrate type (in the form of dumble or oval) and dehydrate type (in the form of double pyramid). The cause is multifactorial including diet, genetic and environmental.

The animals treated with Nerunjilmul chooranam had excreted significantly smaller calcium oxalate crystal of dihydrate and monohydrate variety in the treatment group than in the positive control group ($P<0.01$). This indicates that the drug inhibit the growth of the crystals or dissolve the preformed crystals (Table 1). This treatment lowered the level of serum urea and creatinine in the treatment groups, when compared with that of the positive control (Table 3).

Hyperoxaluria is usually the initiating factor of oxalate urolithiasis. The increase in calcium and oxalate concentration in the kidneys were found

to be very high in the glycolic acid treated control group (Table 2).There was significantly low deposition in the kidneys of the treated group animals and the concentration of calcium and oxalate was found to be very low (P<0.001) as compared to the glycolic acid control. The results were tabulated.

Effect of extract of test drug on urinary calcium, oxalate and phosphate on induced urolithiasis Table – 1.

Treatment	Calcium mg/dl	Phosphate mg/dl	Oxalate mg / dl
Control (Vehicle)	8.93 ± 0.41	47.34 ± 3.8	4.39 ± 0.33
Glycolic acid control	13.37 ± 0.81	71.93 ± 5.3	9.6 ± 0.88
Nerunjilmul chooranam (100 mg/kg	8.83 ± 0.71*	49.47 ± 3.8*	5.31± 0.28*
Nerunjilmul chooranam (200 mg/kg	8.02 ± 0.78*	48.01 ± 3.3*	4.52± 0.38*

Data are expressed as mean ± S.E., n = 6

* P < 0.001 Vs Control by students ‘t’ test.

Effect of Nerunjilmul chooranam on Size and type of calcium oxalate crystals in the urine samples of rats.

Table 2

Group	Size (μm)	Types of crystals
Control (Vehicle)	0.12 ± 0.02	Dihyrate
	0.19 ± 0.03	Monohydrate
Control (1% glycolic Acid)	0.33 ± 0.02	Dihydrate
	0.45 ± 0.02	Monohydrate
Treatment (1% Glycolic acid + Nerunjilmul chooranam 100mg/kg)	0.18 ± 0.01	Dihydrate
	0.28 ± 0.02	Monohydrate
Treatment (1% Glycolic acid + Nerunjilmul chooranam 200mg/kg)	0.14 ± 0.01	Dihydrate
	0.22 ± 0.01	Monohydrate

Data are expressed as mean ± S.E., n = 6.

Effect of Nerunjilmul chooranam on Serum Urea & Creatinine on Glycolic acid induced urolithiasis

Table 3

Treatment	Urea (mg / dl)	Creatinine (mg / dl)
Control (Vehicle)	38.91 ± 3.5	0.68 ± 0.03
Glycolic acid (Control)	45.31 ± 3.8	0.71 ± 0.05
Nerunjilmul chooranam (100mg / kg)	44.3 ± 3.8	0.70 ± 0.05
Nerunjilmul chooranam (200mg /kg)	41.21 ± 2.3*	0.68 ± 0.03

Data are expressed as mean ± S.E., n = 6,

*P<0.05 Vs Control by students 't' test.

Inference

From the above experiment, it was inferred that the drug ethanol extract of Nerunjilmul has got significant lithotriptic action.

ANALYSIS OF DIURETIC EFFECT OF NERUNJILMUL

Aim

To evaluate the diuretic effect of Nerunjilmul

Preparation of the test drug

1gm of Nerunjilmul extract was dissolved in 10ml of distilled water, thus 1ml contains 100mg of Nerunjilmul extract.

Procedure

The method of lipschitiz et.al was employed for the assessment of diuretic activity. Groups of 9 male albino rats, each weighing 80-120gm were fasted and deprived of water for18 hours prior to the experiments. They were divided into 3 equal groups of 3 rats each and put into 3 different metallic cages. On the day of the experiment all the animals were given normal saline orally 2.5ml/ 100gm body weight. Group I served as the negative control which received only normal saline 2.5ml/100gm. Group II received Frusemide 2mg/ 100gm as reference diuretic and Group III received test drug at a dose of 100mg/ 100 gm orally, 1 hour prior to the administration of normal saline.

Immediately after dosing, the animals were placed in metalic cages specially designed to separate urine and faeces and kept at room temperature of $25^0 \pm 0.5^0$ C. The urine was collected in measuring cylinder upto 5 hours

after dosing. During this period no water and food was made available to the animals. The total volume of urine collected was measured for the control and treated groups.

Diuretic effect of Nerunjilmul chooranam

S.No.	Name of the Drugs/Groups	Dose /100gram body weight	After Drug Administration		
			1 ½ hour	3 hours	4 ½ hours
1.	Control (Saline)	-	3.0ml	6.0ml	7.0ml
2.	Nerunjilmul Chooranam	200mg	5.0ml	9.0ml	14.0ml
3.	Frusemide	2mg			

Inference

From the above experiment, it was inferred that the drug extract of Nerunjilmul has got significant diuretic action.

ANTI-SPASMODIC EFFECT OF NERUNJILMUL CHOORANAM ON ISOLATED RABBIT ILEUM

Aim

To find out the anti-spasmodic effect of Nerunjilmul chooranam on isolated Rabbit ileum.

Preparation of the test drug

250 mg Nerunjilmul chooranam was dissolved in 10 ml of water and boiled for 15 minutes. The filtrate was used for the experiments.

Solutions required

Acetyl- choline -10mg/ml, Homatropine10mg/ml

Test Drug Nerunjilmul chooranam 25mg/ml.

Nutrient solution

Tyrode-1 to 2 litres

Tissue used

Rabbit ileum

Apparatus required

Student's Organ bath, Sherrington rotating drum.

Procedure

A Rabbit was starved for 48 hours and was allowed water ad-libtum. It was sacrificed by a blow on the head and by carotid bleeding. The

abdomen was quickly opened and the ileo-caecal junction was found out. A small piece of ileal portion was cut, removed and placed in a dish containing warm aerated Tyrode solution. The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it. 3 cms length segment was cut from this part of ileum and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained at 37^0 C bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Acetyl-choline. 0.2ml (10mg/ml) of Acetyl-choline was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Acetyl choline was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (10mg/ml) Acetyl-choline was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Acetyl-choline solution and test drug solutions were washed out. Then the above experiment was done for 0.2ml dose of Acetyl – choline. The drum was allowed to run for 30 seconds. The response was recorded.

Then 0.2 ml of Homatropine and 0.2ml of Acetyl-choline was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph and it seems to be a at baseline. Then 0.2ml of Acetyl-choline was added to standardise the tissues. Then the tracing was labelled and fixed.

Inference:

From the graph it is inferred that the test drug antagonize the effect of Acetyl-choline when added together. So the Nerunjilmul chooranam has got significant anti-spasmodic activity.

ANTI-MICROBIAL (BACTERIAL) ACTIVITY OF NERUNJIL MUL CHOORANAM

Aim

To identify the anti-microbial (Bacterial) activity of Nerunjil Mul chooranam against Streptococcus, Staphylococcus, Proteus, Psuedomonas, E.coli.

Medium : Muller Hinton agar

Components of Medium

Beef extract	:	300gms /lit
Agar	:	17gms /lit
Starch	:	1.50gms /lit
Casein Hydroxylate	:	17.50gms /lit
Distilled Water	:	1000 ml
pH	:	7.6

Procedure

The media was prepared from the above components and poured and dried on a Petri dish. The organism was streaked on the medium and the test drug (1 gm drug in 10 ml of Water) was placed on the medium. This is incubated at 37^0C for one over night and observed for the susceptibility shown up clearance around the drug.

KIRBY BAUER ANTIMICROBIAL SUSCEPTIBILITY METHOD

RESULT TABLE

S. No.	Name of the Organism culture	Susceptibility
1.	Staphylococcus aureus	R
2.	Streptococcus pneumoniae	R
3.	Escherichia coli	R
4.	Proteus	R
5.	Pseudomonas aeruginosa	R
6.	Klebsiella	R
7.	Candida albicans	R

R – Resistant

Result

The test drug Nerunjil Mul Chooranam is resistant to all the above organisms.

CLINICAL ASSESSMENT

Cases for clinical trial of Lithotriptic effect on Kalladaippu Noi were selected from the out patient department of the Government Siddha Medical College Hospital, Palayamkottai.

The Patients were selected as Kalladaippu Noi according to the following criteria.

INCLUDING CRITERIA

- ❖ Pain abdomen
- ❖ Pain in the loin radiating to groin
- ❖ Intermittent dull pain in the loin
- ❖ Burning micturition.
- ❖ Dysuria
- ❖ Haematuria
- ❖ Increased frequency of micturition
- ❖ Nausea
- ❖ Vomiting
- ❖ Presence of crystals in the urine
- ❖ Ultrasonogram of abdomen and pelvis with positive results for Kalladaippu Noi.

EXCLUDING CRITERIA

- ❖ Renal calculus with renal failure
- ❖ Renal calculus with acute severe colic pain associated with severe vomiting
- ❖ Renal calculus found along with malignancy of kidney
- ❖ Ureteric calculus with urethral obstruction

The trial was done on 30 patients of different age and both sexes.

PARAMETERS FOLLOWED

The clinical condition was diagnosed and confirmed on the basis of clinical signs and symptoms, lab investigation and ultrasonogram of abdomen and pelvis and routine investigation like.

BLOOD ANALYSIS

- ❖ Blood sugar
- ❖ Urea
- ❖ WBC/ TC, DC
- ❖ ESR
- ❖ Hb

URINE ANALYSIS

- ❖ Albumin
- ❖ Sugar
- ❖ Deposits

were done in laboratory of Government Siddha Medical College Hospital, Palayamkottai before and after treatment.

LINE OF TREATMENT

The patients were orally administered Nerunjil mul Chooranam in a dose of 2 grams along with Honey twice a day after food.

Ultrasonogram abdomen and pelvis, Clinical Pathological examination were carried out before and after treatment. The clinical improvements were recorded for every seven days.

Instructions

- ❖ Not to take any other lithotriptic drug of any other system whether indigenous or modern, when they were on trial.
- ❖ Incidental ailments were treated with appropriate Siddha medicine.
- ❖ Advised to attend out patients department every week Thursday for the collection of medicine, clinical examination and lab investigation.

உணவு முறைகள்

- ❖ முள்ளங்கி, சுரைக்காய், வெள்ளரிக்காய், வாழைத்தண்டு, சிறுபீளை முதலியவைகளை சாறாகவோ, நெருஞ்சில், மாவிலிங்கப் பட்டை, காணப்பயிறு (கொள்ளு) முதலியவைகளைக் குடிநீராகவோ சேர்த்துக் கொள்ள அறிவுறுத்தப்பட்டது.
- ❖ சுண்ணச்சத்து (Calcium) அதிகமாக உள்ள பசலைக்கீரை, அகத்திக்கீரை முதலியவைகளையும் தக்காளி, முட்டைகோஸ், காலி.ஃபிளவர், பிளம்ஸ்,ஸ்ட்ரா-பெரி (Strawberry) முதலியவைகளையும் உணவில் குறைவாக சேர்க்க அறிவுறுத்தப்பட்டது.
- ❖ உணவில் பால் மற்றும் பால் சேர்த்து செய்யப்படும் உணவுப் பண்டங்களை குறைக்க அறிவுறுத்தப்பட்டது.
- ❖ அசைவ உணவுகளான மீன், மாமிசம், முட்டை, குடல், ஈரல், மூளை போன்றவற்றை அடிக்கடி உணவில் சேர்த்து கொள்வதை தவிர்க்க அறிவுறுத்தப்பட்டது.
- ❖ முக்கியமாக Vitamin A சத்து குறைபாடு இல்லாமல் பார்த்துக் கொள்ள வேண்டும். இச்சத்து மிகுதியாக உள்ள பப்பாளி, கொய்யா, தர்ப்பூசணி, பூசணி, கேரட் போன்ற பச்சைக் காய்கறிகளை அதிகமாக உணவில் சேர்த்துக் கொள்ள அறிவுறுத்தப்பட்டது.
- ❖ காய்ச்சி ஆறிய வடிகட்டிய நீரையே பருக அறிவுறுத்தப்பட்டது. (தினமும் சுமார் 2 முதல் 3 லிட்டர் வரை)
- ❖ சிறுநீரகத் தொற்றுநோய்களுக்கு உடனே மருத்துவம் செய்ய அறிவுறுத்தப்பட்டது.

- ❖ சிறுநீரை அதிகநேரம் அடக்கி வைத்திருப்பதை தவிர்க்க வலியுறுத்தப்பட்டது.
- ❖ வாரம் இருமுறை திரிபலை தைலத்தை தலையில் தேய்த்துக் குளிக்க வலியுறுத்தப்பட்டது.

அஸ்மரிரோக பத்தியம்

கொள்ளு, பச்சைப்பயறு, கோதுமை, பழைய அரிசி, யவதானியம், சிறுகீரை, பூசினிப்பழம், இஞ்சி, யவட்சாரம் அவை அஸ்மரிரோக பத்தியங்கள். மற்றும் விரேசன சிகிச்சை, வமன சிகிச்சை, இலங்கணம், வியர்வை வாங்கல், சலாகைவிடல், பீச்சுதல், பற்று, ஒற்றடம் முதலியவைகளையும் சந்தர்ப்பத்திற்குத் தக்கப்படி செய்யலாம்.

அபத்தியங்கள்:

மூத்திரம், சுக்கிலம் இவைகளின் வேகத்தைத் தடுத்தல், மலத்தை பந்திக்கும் படியான அன்னம், பழைய அன்னம், குளிர்ந்த அன்னம்.

OBSERVATION AND RESULTS

This study has been done to establish the role of Nerunjilmul as a lithotriptic agent in Kalladaippu noi and assess that how far it can be helpful in the management of the disease.

Among the symptoms of Kalladaippu noi nausea, vomiting, burning micturition, dysuria, haematuria, back pain were reduced significantly within 15 days, other symptoms gradually subsided during the remaining course of treatment.

Treatment was given from 28 to 56 days. Gradation of results and the clinical assessments are tabulated.

Among 30 cases 21 cases (70%) showed good response in relief of symptoms and signs, 6 cases (20%) showed fair response and 3 cases (10%) showed poor response.

The age and sex incidence of these cases are shown in Table – 1

S. No.	Age in years	Sex		Total
		Male	Female	
1.	21-30	6	-	6
2.	31-40	7	3	10
3.	41-50	2	3	5
4.	51-60	4	1	5
5.	61-70	3	1	4
Total				30

The drug efficacy on Renal calculus, ureteric calculus and vesical calculus are shown in Table – 2

S. No.	Site of the calculus	No. of cases treated	No. of cases cured	Percentage of cured
1.	Renal calculus	20	14	70%
2.	Ureteric calculus	7	4	57%
3.	Vesical calculus	3	2	67%

The drug efficacy, based on the size of calculus are shown in Table – 3

S. No.	Site of the calculus	No. of cases treated	No. of cases cured	Percentage of cured
1.	5mm and below	11	10	91%
2.	6mm to 10mm	16	11	69%
3.	Above 10mm	3	-	-

Gradation of Results Table – 4

S. No.	Results	No. of cases	Percentage
1.	Good	21	70%
2.	Fair	6	20%
3.	Poor	3	10%

BIO-STATISTICAL ANALYSIS

Aim

The study subjects and the effectiveness of the drugs were analyzed as Mean, Standard deviation and Percentages. The interpretations were made on the basis of student; test 't' test. The S.P.S.S. package was used for the above analysis and interpretations.

Result and discussions:

The study subjects were analysed based on their age and sex. Since the age and sex were independent variable.

Age and Sex

The study subjects selected from the study are 30 in number. Among them 21 are male and 4 are female. They were described by their age and sex as follows.

Sex and Age wise distribution of study subjects shown in Table -1

S.No	Sex	n	Age		't'	significance	95% C.I of the population mean
			Mean	Std.deviation			
1.	Male	21	40.2	14.3	3.3	<0.001	-
2.	Female	9	47.2	10.3			
3.	Total	30	42.33	13.43	-	-	37.3 to 47.3 years

The above table shows the descriptive statistic of the study subjects in respect of age and sex . The mean age of the male is 40.2 ± 14.3 years and the female is 47.2 ± 10.3 years. The difference of age is statistically significatically since 't' value is 3.3 and P<0.001. The mean age of the total study subjects 42.3 ±13.43 years and same of the population mean will be in between 37.3 to 47.3 years.

Effectiveness of the drug

In this analysis also both kidneys of study subjects were taken in to account. If there is no calculus before treatment then the kidneys treated as normal and the size of the calculus present is treated as zero and it there was no calculus found after treatment is also taken as normal and the size of calculus is zero. The bellows mentioned analysis and interpretation clearly shows the effectiveness of the drug Nerunjilmul chooranam.

Distribution of calculus before and after treatment of the study subjects in right and left kidneys shown in Table-2

S.No	Kidney	n	Calculus before treatment		Calculus after treatment		Mean deference	't'	Significance
			Mean	S.D	Mean	S.D			
1.	Right kidney	30	3.32	3.54	1.10	2.59	2.21	5.1	P<0.000
2.	Left kidney	30	2.71	3.14	0.93	2.46	1.78	4.134	P<0.000

The analysis and interpretations presented in the above table clearly show that the effectiveness of the drug. The mean reduction in the right kidney is 2.21 + 2.3 mm of calculus. The reduction is highly statistically significant. Similarly the left kidneys mean reduction is 1.78 + 2.35 mm of calculus. This reduction is also highly statistically significant. The above reduction of calculus are attributed to the effectiveness of drug Nerunjimul chooranam. This interpretation is also supported by the response of the cases for administration and management of the kalladaippu discuses. Among the 30 cases, 21 are showing good response to the drug. The percentage of good response is 70% and the Pair response is 20% the poor response is 10%. Two third of the study subjects are significantly relieved from the signs and symptoms.

DISCUSSION

According to the Siddha system of medicine, Kalladaippu noi is caused by the derangements of vatha and pitha humours, as said in the following poem.

"தெளிந்ததோர் கல்லடைப்பு உற்பத்தி கேளாய்

……..

வளிந்ததோர் வாத பித்தங் கோபித்தால்

வந்து பெருங்கல்லாய் நீர் வழியடைத்து

நலிந்ததோர் நாலுவிதக் கல்லடைப்பு

நண்பான வரலாறு நாட்டக் கேளே."

- யூகி சிந்தாமணி

Thus the vitiated vatha and pitha humours reflect in the clinical symptoms like nausea, loin to groin pain, burning micturition and dysuria. The above signs and symptoms were relieved by the administration of the drug Nerunjilmul chooranam.

"வாதம் மேலிட்டால் மதுரம் புளி உப்பு

……"

"பித்த மதிகரிப்பின் பேசும் பரிகாரம்

சுத்த துவரொடு சொல்லினிப்பு சத்தாகும்.

……."

- நோய் நாடல் நோய் முதல் நாடல்

பாகம் - I

As per the text it is understood that to neutralize the vitiated vatha and pitha humours, we have to give a drug which possess Inippu and Thuvarppu suvai.

The Nerunjilmul chooranam had Inippu and Thuvarppu suvai. Inippu suvai is made up of mann + neer and Thuvarppu suvai is made up of mann+ vali according to Panjabootham theory. It possesses thatpa veeriyam. There fore the drug neutralizes the vitiated vatha and pitha humours.

The above Gunapadam explanation of the drug is supported by the pharmacological and clinical studies.

The Chemical analysis of the drug was done in the Bio-chemistry Laboratory of Govt. Siddha Medical College, Palayamkottai. The analysis report confirms that the drug contains trace amount of sulphate, ferrous iron, trace amount of phosphate and unsaturated compound.

The Pharmacological analysis of the drug was done in the Department of Pharmacology, Govt. Siddha Medical College, Palayamkottai and Periyar Maniyammai College for Girls, Trichy. The analysis establishes that the drug has got significant lithotriptic, diuretic and antispasmodic actions.

In the clinical trial 30 out patients of both sexes and different age groups were selected. The author diagnosed the disease Kalladaippu according to the siddha aspect. Ultrasonogram of abdomen and pelvis was

taken for all patients before and after treatment to confirm the diagnosis and improvement.

All the patients were given 2 grams of Nerunjilmul Chooranam twice a day with honey after food.

Out of 30 cases 21 cases (70%) showed good response, 6 cases (20%) showed fair response and 3 cases (10%) showed poor response.

There was no withdrawl symptoms and no adverse effects during the trial period.

SUMMARY

- The test drug Nerunjilmul chooranam was selected for this study to establish the Lithotriptic, diuretic and antispasmodic actions in the management of Kalladaippu noi.
- From the review of Botanical aspect, the identification of the Nerunjilmul was made possible.
- The review of Gunapadam aspect from the literature supports the therapeutic efficacy of the drug.
- The Biochemical analysis revealed that the Nerunjilmul chooranam contains sulphate, ferrous iron, phosphate and unsaturated compounds.
- The pharmacological analysis revealed that the drug has got significant diuretic, antispasmodic and lithotriptic actions.
- From the clinical assessment, it is inferred that the drug had a good response in 70% of cases, fair response in 20% of cases and poor response in 10% of cases. Therfore the test drug Nerunjilmul chooranam is safe, simple, cost effective in the treatment of Kalladaippu noi.

CONCLUSION

It is concluded that the drug Nerunjilmul chooranam has got significant effect in the treatment of Kalladaippu noi without producing any untoward effects.

INTRODUCTION

Siddars were experts in preparing drugs from animal origin or Jeeva vahuppu. Animal sources are rich in minerals. Oyster shell, conch etc., are rich in calcium and phosphate.

Our Siddhars in early days itself had given in detail about each and every living organism which is useful for mankind, the animal products which can be used to prepare medicines etc.

In Gunapadam Jeeva vahuppu it is discussed elaborately about edible fishes, meat, eggs etc., which have therapeutic value.

The author was much interested in Jeeva vahuppu which made her to choose Virahlmeen thalaikal (CHANNA STRIATUS - OTOLITH) parpam to study the lithotriptic action mentioned in literatures. The author wanted to do a detailed study in lithotriptic action as no other system has an exact medicine for calculus.

In this fast going world no body finds time to consume adequate water to keep the uro–genital tract healthy. Aerated drinks, fast foods, high calorie condensed milk products have caused a rise in persons suffering from calculus. The drug Virahlmeen thalaikal parpam proves to be a very effective lithotriptic.

AIM AND OBJECTIVE

In Siddha system of medicine, the products of animal origin such as flesh, blood, bile, eggshells, hair, nails, bone, teeth, excreta etc., are used as raw materials in the preparation of drugs which can cure various diseases.

Several research attempts have been made in Gunapadam Jeeva vahuppu so far. But pharmacological aspects are not evaluated for many drugs. The author has chosen Virahlmeen thalaikal parpam as her dissertation.

Parpams are quickly assimilated into the general system and they directly undergo metabolism and have a definite action. Even a small dose has optimum effect. The clinical study was made on the effect of Virahlmeen thalaikal parpam on Kalladaippu patients.

REVIEW OF LITERATURE

ZOOLOGICAL ASPECT

TAMIL NAME : விரால் மீன்

ZOOLOGICAL NAME : CHANNA STRIATUS

It is an one of the fresh water fish. The fresh water fishery resources consist of rivers, canals, irrigation channels, pools, lakes, jheels, bheels, tanks, ponds and low lying areas which contain water either perennially or temporarily.

In India major rivers are the main source of fresh water fisheries.

The following species are generally stocked in ponds.

Catla catta (Ham.)

Labeo rohita

L.fimbriatus

L.calbasu

L.kontius

L.bata

Cirrhinus mrigala

C.cirrhosa

C.reba

Puntius carnaticus (Jeedou)

Cyprinus carpio

Etoplus suratensis

Osphronemus goramy

Chanos chanos

Mugil cephalus

Channa marulius

Channa striatus

The principal freshwater fisheries, in order of importance

Major carps : Catla catla, Labeo rohita, L.calbasu, L.fimbriatus, Cirrhinus mrigala, Tor and puntius spp.

Cat fishes : Bagarius bagarius, Pangasius pangasius, Silonia silonia, Mystus seenguala (Sykes) M.aor, Eutropiichthys vacha.

Sheat fishes : Wallago attu, Ompok bimaculatus

Live fishes : C;aroas batrachus, Heteropneuster fossil, Anabas testudineus, **Channa striatus** C.gachua and C.punctatus.

Mullets : Liza corsula, L.cascasia

Feather Backs : Notopterus chitala and N.notopterus

Alerrings : Hilsa ilisha.

Anchovies : Setipinna phasa

Eels : Anguilla bengalensis and Mastocembelus armatus

Miscellaneous : Cirrhinus reba, Labeo bate and various species of the genera Puntius, Oxygaster, Etroplus and Tor.

It is found in freshwater of the plains of India. Commonly known as snake heads. Body dark brown or black above, yellowish or orange below the lateral line. Body elongated, anteriorly cylindrical, posteriorly compressed; head depressed single long dorsal and anal fins of uniform flexible rays; gill openings wide and membranous with vascular folds enabling air breathing. These fishes chiefly in habit muddy shallow waters and are useful for stocking unreclaimed swamps, foul waters and wells in arid regions. They can be transported alive and are commonly known as joolmachh or live fishes all over the Indopacific region. Their muddy taste can be eliminated by keeping them in clean water for some days.

ZOOLOGICAL CLASSIFICATION

Kingdom	:	Animalia
Phylum	:	Chordata
Subphylum	:	Vertebrata
Superclass	:	Osteichthyes
Class	:	Actinopterygii
Subclass	:	Neopterygii
Infraclass	:	Teleostei
Superorder	:	Acanthopterygii
Order	:	Perciformes
Suborder	:	Channoidei
Family	:	Channidae
Genus	:	Channa (Scopoli 1777)
Species	:	striatus (Bloch 1793)

Other Names:

HINDI	:	Morrul, Murl, dheri-murl
BENG	:	Shol, holi
MAR	:	Sohr, dakhu
TEL	:	Korra meenu, budda matta
TAMIL	:	Virahl (Madras), Veralu, caruppu veralu

KAN	:	Pooli kuchi, Koochina murl , Kuchhi meenu
MAL	:	Kannan, Choliyan, Warl
ORIYA	:	Sola
PUNJAB	:	Sowl, dhoalec
BIHAR	:	Sowra
ASSAM	:	Hal, Shaul, gojhal (young),Latta
COOR	:	Owlu menu

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OTOLITH

An Otolith called ‘ear stone’ is present in the head of fishes of particular types in the area between two eyes behind the nostrils.

They are of different shapes and sizes in different fishes. They are very important in the growth of fishes.

They increase the auditory capacity of the fish and also helps in maintaining equilibrium in streamline.

Otoliths are formed due to deposition of calcium carbonate. The age of the fish can be calculated with the help of annuli present in the otolith.

GUNAPADAM ASPECT

விரால்மீன் (வரால்மீன்)

சங்க இலக்கிய பெயர் : வரால்

அறிவியல் பெயர் : Channa spp

ஆங்கிலப் பெயர் : Snake head murrel

தமிழ் வழக்குப் பெயர் : விரால், வரால்

A fresh water fish which invariably possess a stone in the head. The stone is diuretic.

- T.V.Sambasivam pillai Vol-V Page no. 3636

வரால் மீன் : (Channa spp/ Snake head murrel/ River murrels)

பொதுகுணம்

கடலில் வாழும் வரால்மீனை உண்பதைத் தவிர்த்து, குளத்தில் வாழ்கின்ற வரால்மீனை உண்ணுதல் உடலுக்கு நலம்தரும் என்பதைக் கீழ்வரும்.

"உடலை வளர்க்கும் உறுபிணியைத் தீர்க்குங்
குடலுக் கதிகசுகங் கொடுக்குங் - கடலை
யுழக்கும் வராலை விட்டிங் வூக்குளத்துச் சேற்றை
யுழக்கும் வராலதனை யுண்."

என்ற பாடலானது விளக்குகிறது. குளத்து வரால்மீனை உண்பவர்களது உடற்பிணிகள் அனைத்தும் நீங்கி உடல் நன்கு வளருமென்றும், குடலுக்கு அதிக சுகம் தருமென்றும் கூறப்படுகிறது.

- மீன்கள் அன்றும் இன்றும் பக்கம் எண்:79

சங்க இலக்கியங்களில் வரால் மீன்

"கருங்கண் **வராஅல்** பெருந்தடி மிளிர்வையொடு
புகர்வை அரிசிப்பொம்மல் பெருஞ்சோறு
கவர்படு கையை கழும மாந்தி."

- நற்றிணை 60: 4-6

"வலைவல் பாண்மகன் வாயிலெற்று மடமகள்
வராஅல் சொரிந்த வட்டியுண் மனையோள்."

- ஐங்குறுநூறு -48

"நாள்துறைப் பட்ட மோட்டுஇரு வராஅல்
துடிக்கண் கொழுங்குறை நொடுத்து உண் ஆடி."

- அகநானூறு -196, 2-3

"நாண்கொள் நூண்கோலின் மீன்கொள் பாண்மகள்
தான்புனல் அடைகரைப் படுத்த **வரால்அல்**
நார் அரி நறவு உண்டு இருந்த தந்தைக்கு"

- அகநானூறு 216-13

"கண்புமலி பழனங் கமழத் துழைஇ
வலையோர் தந்த விருஞ்சுவல் வாளை
நிலையோரிட்ட நெடுநாண் டூண் டிற்
பிடிக்கையென்ன செங்கண் வராஅற்
றுடிக்கணன்ன குறையொடு விரைஇ."

- மலைபடுகடாம் 454-458

"அஞ்சனக் குன்றேய்க்கும் யானை யமருழக்கி

இங்குலிகக் குன்றேபோற் றோன்றுமே - செங்கண்

வரிவரால் மீன் பிறழுங் காவிரி நாடன்

பொருநரை யட்ட களத்து"

- களவழி நாற்பது -7

"சிறிய பொருள் கொடுத்துச் செய்த வினையால்

பெரிய பொருள் கருதுவாரே ___ விரிபூ

விராஅம் புனலூர வேண்டயிரையிட்டு

வராஅல் வாங்குபவர்."

- பழமொழி நானூறு - 302

"முட்ட முதுநீ ரடைகரை மேய்ந்மெழுந்து

தொட்ட **வரிவரால்** பாயும் புனலூரன்

கட்டலர் கண்ணிப் புதல்வனைக் கொண்டெம்மில்

சுட்டி யலைய வரும்."

- கைந்நிலை- 39

மீன்கல்

மீன்கள் தலையிலுண்டாகும் கெட்டியாயுள்ள வெளுத்த கல். இதைத் தண்ணீரிலுரைத்துக் குடிக்கக் கல்லடைப்புப் போம்.

A Stone in the head of some fish. It is a good diuretic, even removes stones in the bladder and kidney.

T.V.Sambasivam pillai Vol-V

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மீன்கல் சேரும் பிறநோய்க்கான மருந்துகள்

பெரிய வரால்மீனின் தலையிலுள்ள கல்போன்ற **காதுறுப்பினைப்** (Ear stone) பயன்படுத்திக் தயாரிக்கப்படும் மச்ச இரத்தின அஞ்சனமை அல்லது வரால்மீன்மை கண்நோய்களைப் போக்கிடும் என்பதைக் பின்வரும் பாடல் விளக்குகிறது.

"பெரிய வரால்மீன் கல்குங்கு மப்பூபேசும் அந்நிறையாங்
கரியஞ்சனக்கல் துட்டிடையுங் கனக்கக் குழியில் தானிட்டுத்
தெரியப்புளி மாதுளைச் சாற்றில் திறமாயரைத் தேயதிலுலர்த்தி
அரிய பொடியைக் கண்ணிலிட அகலும் பூச்சதை அஞ்சனமே"

வரால்மீனின் தலையிலுள்ள கல், (இதனை மச்ச இரத்தினம் என்று கூறுவர்) அதே நிறையுள்ள குங்குமப்பூ, கரியநிறமுள்ள அஞ்சனக்கல் இம்மூன்றையும் கல்வத்திலிட்டு புளிப்பு மாதுளம் பழச்சாறு விட்டு அரைத்து உலர்த்திப் பொடியாக்கிக் கண்ணிலிட கண்சதை, பூ ஆகியவை தீரும்.

- மீன்கள் அன்றும் இன்றும்

பக்கம் எண் - 79

- முதிர்ந்த வரால்மீனின் தலையிலுள்ள கல்லை எடுத்து பற்பம் செய்து கொடுக்க காசநோய் விலகும்.

- பதார்த்த குணபாடம் பக்கம் எண்- 355

வரால் மீன்மை

"நலமுடன் விரால்மீன் இரைகுடல் தன்னை
நன்னிரை ஆ வெண்ணெய தனை
நன்மையாம் மதுரைக் கலந்த தனிலமைத்து நல்முறிச்
செம்பதாலிழைத்துப்
பெலமுடன் வழித்துச் சிமிழ் தனிலடைத்துப் பேணி நீமை
தனைக் குறித்துப்
பிரியமாய்ச் சிறிய பயறள வெழுதிப் பிணியாளர்
கண்ணினை விரித்து -வலமதாய்
நீயும் மதிமுகம் நோக்கி வரிசையாய்ப் பாக்குமப்
பொழுதில் வசைகெட வந்த படலமுங்
குந்தம் மருவிய நாக மாம்படலம்
குலமதாங் கழலை ஆணிப் பூமுதலாய்க் குடியொடுங்
கடிகை நாலாறில்
குணமுள்ள வமிர்தாஞ் சீவியெனும் பேர்கூறினர் மலை முனிதெரிந்தே"

என்ற பாடல், வரால்மீன் மையின் குணங்களை விவரிக்கிறது.

வரால்மீனின் குடல் பகுதியினை எடுத்து அதனுடன் அதே நிறை யுள்ள பசுவெண்ணெயைச் சேர்த்து அதனைச் செப்பு பாத்திரத்தில் வைத்து, அதனை வெண்கலப் பாத்திரத்தால் இழைத்து பிறகு வழித்து எடுத்து ஒரு சிமிழில் அடைத்துக் கொள்வர். இந்த மையில் ஒரு சிறிய பயறளவு எடுத்துக் கண்ணில் தடவிவர கண்ணில் ஏற்படும் படலம், குந்தம், நாகபடலம், கழலை, ஆணிப்பூ இவைகள் குணமாகும் என்பார்கள். இம்மருந்தினை "அமிர்த சஞ்சீவி" என்று கூறுவர்.

- மீன்கள் அன்றும் இன்றும்

பக்கம் எண் - 79

MATERIALS AND METHODS

The drug Virahlmeen thalaikal parpam was prepared with reference from “Noikalukku Siddha Parikaram” Part II, Page no. 4

Collection of test drug:

Virahlmeen thalaikal was purchased from a fish market at Dharmapuri.

Purification of the test drug

Blood and dirt on the Virahlmeen thalaikal were washed with luke warm water and dried.

Preparation of the test drug

The dried virahlmeen thalaikal were ground into powder in the kalvam. Rose water (Panneer) was added in small quantities to the powder as and when needed and ground it well for 2 days. After 2 days, the karkam was made into small villais. The villais were dried well in shade. Then the dried villais are again put into kalvam and ground into very fine powder. This was stored in a dry clean air tight container.

Dose	:	65 mg twice a day after food
Adjuvant	:	Nerunjil kudineer / Sirupeelai kudineer.
Route of admisistration	:	Enteral route

This prepared Nerunjimul chooranam was used for the following methods

- Biochemical analysis
- Pharmacological analysis
- Microbiological analysis
- Clinical studies.

BIO - CHEMICAL ANALYSIS

BIO - CHEMICAL ANALYSIS OF VIRAHLMEEN THALAIKAL PARPAM

Preparation of the Extract

100mgs of Parpam was weighed accurately and placed in a 250ml clean beaker. Then 50ml distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made up to 100ml with distilled water. This fluid is taken for analysis

QUALITATIVE ANALYSIS

S. No	Experiment	Observation	Inference
1.	**Test for calcium** 2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.	A white precipitate is formed.	Indicates the presence of **calcium.**
2.	**Test for sulphate** 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed.	Absence of sulphate.

3.	**Test for chloride** The extract is treated with silver nitrate solution.	A white precipitate is formed	Indicates the presence of **chloride**.
4.	**Test for carbonate** The substance is treated with concentrated Hcl.	No brisk effervescence is formed.	Absence of carbonate.
5.	**Test for Zinc** The extract is added with Potassium ferro cyanide solution.	No white precipitate is formed	Absence of zinc.
6.	**Test for iron** **Ferric** The extract is treated with concentrated glacial acetic acid and potassium ferro cyanide.	No blue colour is formed.	Absence of ferric iron.
7.	**Test of iron** **Ferrous** The extract is treated with concentrated Nitric acid and ammonium thio cynate.	Blood red colour is formed.	Indicates the presence of **ferrous iron..**

8.	**Test for phosphate** The extract is treated with ammonium molybdate and concentrated nitric acid.	No Yellow precipitate is formed.	Absence of phosphate.
9.	**Test for albumin** The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of albumin.
10.	**Test for Tannic acid** The extract is treated with ferric chloride reagent.	No blue black precipitate is formed.	Absence of Tannic acid.
11.	**Test for unsaturation** Potassium permanganate solution is added to the extract.	It does not get decolourised.	Absence of unsaturated compound.
12.	**Test for the reducing sugar** 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of reducing sugar.

13.	**<u>Test for amino acid</u>** One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% ninhydrin is sprayed over the same and dried it well.	Violet colour is formed.	Indicates the presence of **amino acid.**

INFERENCE

The given sample of Virahlmeen thalaikal parpam contains ferrous iron, calcium, chloride and amino acid.

PHARMACOLOGICAL ANALYSIS

LITHOTRIPTIC ACTION OF VIRAHLMEEN THALAIKAL PARPAM

Aim

To evaluate the lithotriptic effect of Virahlmeen thalaikal parpam.

Preparation of extract of Virahlmeen thalaikal parpam

The dried materials were, pulverized by a mechanical grinder sieved through No. 40 mesh. The powdered materials were extracted with Ethanol using soxhlet extraction apparatus. This Ethanol extract was then concentrated and dried under reduced pressure. The Ethanol free semisolid mass thus obtained was used for the experiment.

Preparation of the test drug

1 gm of ethanol extract of Virahlmeen thalaikal was dissolved in 10ml of distilled water, thus 1 ml contains 100mg of test drug.

Procedure

Groups of 24 inbred male albino rats of the Wistar strain (150-180gm) were fed standard pelleted diet and water was given ad libitum. They were acclimatized to the animal house conditions for a week. They were then divided into 4 groups comprising six animals in each. Group I received the commercial diet and served as controls. Group II administered a calclui – producing diet (CPD) commercial diet mixed with 3% glycolic acid

for 40 days (Chow et.al., 1974). Group III – IV received the commercial diet for 40 days with Virahlmeen thalaikal parpam (10mg/kg & 20 mg/kg) respectively being administered during the last 20 days. The drugs were administered orally by stomach tube.

Collection and analysis of urine samples

On the day before being killed, the rats were housed in metabolic cages for 24hr urine collections. A drop of concentrated HCL was added to the urine before being stored at 4^{o} C. Urine samples were centrifuged and one drop of deposit was transferred using Pasteur pipette on to a glass slide. Size of the crystals in the three zones at random was measured by light microscope using calibrated eyepiece and micrometer (Eliotte et.al.,1980). Urine samples were tested spectrophotometrically to determine the contents of Calcium, Oxalate, Phosphate. The blood samples were tested to determine the urea and creatinine.

Histological Examination

The kidneys were isolated and homogenized with normal saline and estimated for the Calcium, Oxalate & Phosphate.

The Kidneys were fixed in 10% Normal saline, sectioned and stained with Haematoxylin & Eosin (Clayden, 1971). The Kidney specimens were examined under light microscopy to evaluate glomerular damage, tubular dilatation and inflammation.

Urinary calcium, phosphate and oxalate content were found to be increased in the glycolic acid control group as compared to the solvent control. All these parameters were brought to near normal in the treated group when compared to the glycolic acid control. In our study it was noted the urinary output of the treated group increases as compared to the solvent control indication diuretic activity of the drugs which may also contribute in preventing the deposition of oxalate, calcium and phosphates.

Histological examination of kidneys showed tubular necrosis and damage in all the animals in the glycolic acid control group. The morphology of kidneys in the treatment group was almost normal indicating the protective effect of the drugs against ethylene glycol induced toxicity.

The result indicate the potential antiurolithiatic activity of the Virahlmeen thalaikal parpam on glycolic acid induced urolithiasis.

Reference

Chow, FHC., Dysart, MI., Hamar, DW.and Udall, R.H.Invest Urol, 1975,13,113.

Clayden, EC., 1971 Practical section, cutting and staining, 5th ede, Chruchill Livingstone, Edinburgh.

Elliot, JS.and Rabinowitz, I N., Calcium oxalate crystalluria crystal size in urine, The Journal of urology, 1980, 123, 324-27.

RESULT AND DISCUSSION

Urolithiasis is a condition where there is formation of stone in the urinary system, i.e., in the kidney, ureter, urinary bladder or in the urethra. Generally there are five different types of stones of which calcium oxalate is most common and calcium phosphate, magnesium, ammonium phosphate, cystine and uric acid stones. There are two varieties in calcium oxalate stone, i.e., monohydrate type (in the form of dumble or oval) and dehydrate type (in the form of double pyramid). The cause is multifactorial including diet, genetic and environmental.

The animals treated with Virahlmeen thalaikal parpam had excreted significantly smaller calcium oxalate crystal of dihydrate and monohydrate variety in the treatment group than in the positive control group ($P<0.01$). This indicates that the drugs inhibit the growth of the crystals or dissolve the preformed crystals (Table 1). This treatment lowered the levels of serum urea and creatinine in the treatment groups, when compared with that of the positive control (Table 3).

Hyperoxaluria is usually the initiating factor of oxalate urolithiasis. The increases in calcium and oxalate concentration in the kidneys were found to be very high in the glycolic acid treated control group (Table 2).There was significantly low deposition in the kidneys of the

treated group animals and the concentration of calcium and oxalate was found to be very low (P<0.001) as compared to the glycolic acid control. The results were tabulated.

Effect of extract of test drug on urinary calcium, oxalate and phosphate on induced urolithiasis. Table – 1

Treatment	Calcium mg/dl	Phosphate mg/dl	Oxalate mg / dl
Control (Vehicle)	8.93 ± 0.41	47.34 ± 3.8	4.39 ± 0.33
Glycolic acid control	13.37 ± 0.81	71.93 ± 5.3	9.6 ± 0.88
Virahlmeen thalaikal parpam (10 mg/kg)	9.81 ± 0.53*	51.58 ± 3.2*	5.73± 0.28*
Virahlmeen thalaikal parpam (20 mg/kg)	8.33 ± 0.71*	48.32 ± 3.3*	4.91 ± 0.38*

Data are expressed as mean ± S.E., n = 6

* P < 0.001 Vs Control by students ‘t’ test.

Effect of Virahlmeen thalaikal parpam on Size and type of calcium oxalate crystals in the urine samples of rats. Table 2

Group	Size (μm)	Types of crystals
Control (Vehicle)	0.12 ± 0.02	Dihyrate
	0.19 ± 0.03	Monohydrate
Control (1% Glycolic acid)	0.33 ± 0.02	Dihydrate
	0.45 ± 0.02	Monohydrate
Treatment (1% Glycolic acid + virahlmeen thalaikal parpam (10mg/kg)	0.17 ± 0.01	Dihydrate
	0.25 ± 0.01	Monohydrate
Treatment (1% Glycolic acid + virahlmeen thalaikal parpam (20mg/kg)	0.18 ± 0.01	Dihydrate
	0.28 ± 0.02	Monohydrate

Data are expressed as mean ± S.E., n = 6.

Effect of Virahlmeen thalaikal parpam on Serum Urea & Creatinine on Glycolic induced urolithiasis.

Table 3

Treatment	Urea (mg / dl)	Creatinine (mg / dl)
Control (Vehicle)	38.91 ± 3.5	0.68 ± 0.03
Glycolic acid (Control)	45.31 ± 3.8	0.71 ± 0.05
Virahlmeen thalaikal parpam (10mg / kg)	43.8 ± 1.8	0.69 ± 0.03
Virahlmeen thalaikal parpam (20mg /kg)	39.12 ± 3.2*	0.68 ± 0.01

Data are expressed as mean ± S.E., n = 6,

*P<0.05 Vs Control by students 't' test.

Inference

From the above experiment, it was inferred that the drug ethanol extract of Virahlmeen thalaikal has got significant lithotriptic action.

ANALYSIS OF DIURETIC EFFECT OF VIRAHLMEEN THALAIKAL PARPAM

Aim

To evaluate the diuretic effect of Virahlmeen thalaikal parpam.

Preparation of the test drug

1gm of Virahlmeen thalaikal parpam was dissolved in 10ml of distilled water, thus 1ml contains 100mg of Virahlmeen thalaikal extract.

Procedure

The method of lipschitiz et.al was employed for the assessment of diuretic activity. Groups of 9 male albino rats, each weighing 80-120gm were fasted and deprived of water for18 hours prior to the experiments. They were divided into 3 equal groups of 3 rats each and put into 3 different metallic cages. On the day of the experiment all the animals were given normal saline orally 2.5ml/ 100gm body weight. Group I served as the negative control which received only normal saline 2.5ml/100gm. Group II received Frusemide 2mg/ 100gm as reference diuretic and Group III received test drug at a dose of 100mg/ 100 gm orally, 1 hour prior to the administration of normal saline.

Immediately after dosing, the animals were placed in metabolic cages specially designed to separate urine and faeces and kept at room temperature

of $25^0 \pm 0.5^0$ C. The urine was collected in measuring cylinder upto 5 hours after dosing. During this period no water and food was made available to the animals. The total volume of urine collected was measured for the control and treated groups.

Diuretic effect of Virahlmeen thalaikal parpam

S.No.	Name of the Drugs/Groups	Dose /100gram body weight	After Drug Administration		
			1 ½ hour	3 hours	4 ½ hours
1.	Control (Saline)	-	3.0ml	6.0ml	7.0ml
2.	Virahlmeen thalaikal parpam	40mg	4.0ml	7.0ml	12.0ml
3.	Frusemide	2mg			

Inference

From the above experiment, it was inferred that the drug extract of Virahlmeen thalaikal parpam has got significant diuretic action.

ANTI-SPASMODIC EFFECT OF VIRAHLMEEN THALAIKAL PARPAM ON ISOLATED RABBIT ILEUM

Aim

To find out the anti-spasmodic effect of Virahlmeen thalaikal parpam on isolated Rabbit ileum.

Preparation of the test drug

250 mg Virahlmeen thalaikal parpam was dissolved in 10 ml of water and boiled for 15 minutes. The filtrate was used for the experiments.

Solutions required

Acetyl- choline -10mg/ml

Homatropine 10mg/ml

Test Drug Virahlmeen thalaikal parpam 25mg/ml.

Nutrient solution

Tyrode-1 to 2 litres

Tissue used

Rabbit ileum

Apparatus required

Student’s Organ bath, Sherrington rotating drum.

Procedure

A Rabbit was starved for 48 hours and was allowed water ad-libitum. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileo-caecal junction was found out. A small piece of ileal portion was cut, removed and placed in a dish containing warm aerated Tyrode solution. The lumen of the ileum was gently rinsed out by pushing Tyrode solution into it. 3 cms length segment was cut from this part of ileum and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained at 37^0 C bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Acetyl - choline. 0.2ml (10mg/ml)of Acetyl- choline was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Acetyl - choline was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (10mg/ml) Acetyl - choline was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the

Acetyl - choline solution and test drug solutions were washed out. Then the above experiment was done for 0.2ml dose of Acetyl - choline. The drum was allowed to run for 30 seconds. The response was recorded.

Then 0.2 ml of Homatropine and 0.2ml of Acetyl - choline was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph and it seems to be at a baseline. Then 0.2ml of Acetyl - choline was added to standardise the tissues. Then the tracing was labelled and fixed.

Inference:

From the graph it is inferred that the test drug antagonize the effect of Acetyl - choline when added together. So the Virahlmeen thalaikal parpam has got significant anti-spasmodic activity.

ANTI-MICROBIAL (BACTERIAL) ACTIVITY OF VIRAHLMEEN THALAIKAL PARPAM

Aim

To identify the anti-microbial (Bacterial) activity of Virahlmeen thalaikal parpam against Streptococcus, Staphylococcus, Proteus, Psuedomonas, E.coli.

Medium : Muller Hinton agar

Components of Medium

Beef extract	:	300gms /lit
Agar	:	17gms /lit
Starch	:	1.50gms /lit
Casein Hydroxylate	:	17.50gms /lit
Distilled Water	:	1000 ml
pH	:	7.6

Procedure

The media was prepared from the above components and poured and dried on a Petri dish. The organism was streaked on the medium and the test drug (1 gm drug in 10 ml of Water) was placed on the medium. This is incubated at 37^0C for one over night and observed for the susceptibility shown up clearance around the drug.

KIRBY BAUER ANTIMICROBIAL SUSCEPTIBILITY METHOD

RESULT TABLE

S. No.	Name of the Organism culture	Susceptibility
1.	Staphylococcus aureus	R
2.	Streptococcus pneumoniae	R
3.	Escherichia coli	R
4.	Proteus	R
5.	Pseudomonas aeruginosa	R
6.	Klebsiella	R
7.	Candida albicans	R

R – Resistant

Result

The test drug Virahlmeen thalaikal parpam is resistant to all the above organisms.

CLINICAL ASSESSMENT

Cases for clinical trial of Lithotriptic effect on Kalladaippu Noi were selected from the out patient department of the Government Siddha Medical College Hospital, Palayamkottai.

The patients were selected as Kalladaippu Noi according to the following criteria.

INCLUDING CRITERIA

- ❖ Pain abdomen
- ❖ Pain in the loin radiating to groin
- ❖ Intermittent dull pain in the loin
- ❖ Burning micturition.
- ❖ Dysuria
- ❖ Haematuria
- ❖ Increased frequency of micturition
- ❖ Nausea
- ❖ Vomiting
- ❖ Presence of crystals in the urine
- ❖ Ultrasonogram of abdomen and pelvis with positive results for Kalladaippu Noi.

EXCLUDING CRITERIA

- ❖ Renal calculus with renal failure
- ❖ Renal calculus with acute severe colic pain associated with severe vomiting
- ❖ Renal calculus found along with malignancy of kidney
- ❖ Ureteric calculus with urethral obstruction

The trial was done on 20 patients of different age and both sexes.

PARAMETERS FOLLOWED

The clinical condition was diagnosed and confirmed on the basis of clinical signs and symptoms, lab investigation and ultrasonogram of abdomen and pelvis and routine investigation like

BLOOD ANALYSIS

- ❖ Blood sugar
- ❖ Urea
- ❖ WBC/ TC, DC
- ❖ ESR
- ❖ Hb

URINE ANALYSIS

- ❖ Albumin
- ❖ Sugar
- ❖ Deposits

were done in laboratory of Government Siddha Medical College Hospital, Palayamkottai before and after treatment.

LINE OF TREATMENT

The patients were orally administered Virahlmeen thalaikal parpam in a dose of 65 mgm along with Sirupeelai kudineer twice a day after food.

Ultrasonogram abdoncen and pelvis, clinical Pathological examination were carried out before and after treatment. The clinical improvements were recorded for every seven days.

Instructions

- ❖ Not to take any other lithotriptic drug of any other system whether indigenous or modern, when they were trial.
- ❖ Incidental ailments were treated with appropriate Siddha medicine.
- ❖ Advised to attend out patients department every week Thursday for the collection of medicine, clinical examination and lab investigation.

உணவு முறைகள்

- ❖ முள்ளங்கி, சுரைக்காய், வெள்ளரிக்காய், வாழைத்தண்டு, சிறுபீளை முதலியவைகளை சாறாகவோ, நெருஞ்சில், மாவிலிங்கப் பட்டை, காணப்பயிறு (கொள்ளு) முதலியவைகளைக் குடிநீராகவோ சேர்த்துக் கொள்ள அறிவுறுத்தப்பட்டது.
- ❖ சுண்ணச்சத்து (Calcium) அதிகமாக உள்ள பசலைக்கீரை, அகத்திக்கீரை முதலியவைகளையும் தக்காளி, முட்டைகோஸ், காலி.ஃபிளவர், பிளம்ஸ்,ஸ்ட்ரா-பெரி(Strawberry) முதலியவைகளையும் உணவில் குறைவாக சேர்க்க அறிவுறுத்தப்பட்டது.
- ❖ உணவில் பால் மற்றும் பால் சேர்த்து செய்யப்படும் உணவுப்பண்டங்களை குறைக்க அறிவுறுத்தப்பட்டது.
- ❖ அசைவ உணவுகளான மீன், மாமிசம், முட்டை, குடல், ஈரல், மூளை போன்றவற்றை அடிக்கடி உணவில் சேர்த்து கொள்வதை தவிர்க்க அறிவுறுத்தப்பட்டது.
- ❖ முக்கியமாக Vitamin A சத்து குறைபாடு இல்லாமல் பார்த்துக் கொள்ள வேண்டும். இச்சத்து மிகுதியாக உள்ள பப்பாளி, கொய்யா, தர்ப்பூசணி, பூசணி, கேரட் போன்ற பச்சைக் காய்கறிகளை அதிகமாக உணவில் சேர்த்துக் கொள்ள அறிவுறுத்தப்பட்டது.
- ❖ காய்ச்சி ஆறிய வடிகட்டிய நீரையே பருக அறிவுறுத்தப்பட்டது. (தினமும் சுமார் 2 முதல் 3 லிட்டர் வரை)
- ❖ சிறுநீரகத் தொற்றுநோய்களுக்கு உடனே மருத்துவம் செய்ய அறிவுறுத்தப்பட்டது.

- ❖ சிறுநீரை அதிகநேரம் அடக்கி வைத்திருப்பதை தவிர்க்க வலியுறுத்தப்பட்டது.
- ❖ வாரம் இருமுறை திரிபலை தைலத்தை தலையில் தேய்த்துக் குளிக்க வலியுறுத்தப்பட்டது.

அஸ்மரிரோக பத்தியம்

கொள்ளு, பச்சைப்பயறு, கோதுமை, பழைய அரிசி, யவதானியம், சிறுகீரை, பூசினிப்பழம், இஞ்சி, யவட்சாரம் அவை அஸ்மரிரோக பத்தியங்கள். மற்றும் விரேசன சிகிச்சை, வமன சிகிச்சை, இலங்கணம், வியர்வை வாங்கல், சலாகைவிடல், பீச்சுதல், பற்று, ஒற்றடம் முதலியவைகளையும் சந்தர்ப்பத்திற்குத் தக்கப்படி செய்யலாம்.

அபத்தியங்கள்

மூத்திரம், சுக்கிலம் இவைகளின் வேகத்தைத் தடுத்தல், மலத்தை பந்திக்கும் படியான அன்னம், பழைய அன்னம், குளிர்ந்த அன்னம்.

OBSERVATION AND RESULTS

This study has been done to establish the role of Virahlmeen thalaikal as a lithotriptic agent in the patient of Kalladaippu noi and assess that how far it can be helpful in the management of Kalladaippu noi.

Among the symptoms of Kalladaippu noi nausea, vomiting, burning micturition, dysuria, haematuria, back pain were reduced significantly with in 15 days, other symptoms gradually subsided during the remaining course of treatment.

Treatment was given from 28 to 56 days. Gradation of results and the clinical assessments are tabulated.

Among 20 cases 15 cases (75%) showed good response, in relief of symptoms and signs, 4 cases (20%) showed fair response and 1 case (5%) showed poor response.

The age and sex incidence of these cases are shown in Table – 1

S. No.	Age in years	Sex		Total
		Male	Female	
1.	1-10	-	1	1
2.	11-20	1	1	2
3.	21-30	2	-	2
4.	31-40	6	2	8
5.	41-50	2	-	2
6.	51-60	2	-	2
7.	61-70	2	-	2
8.	Above 70	1	-	1
Total				20

The drug efficacy on Renal calculus, ureteric calculus and vesical calculus are shown in Table – 2

S. No.	Site of the calculus	No. of cases treated	No. of cases cured	Percentage of cured
1.	Renal calculus	13	10	77%
2.	Ureteric calculus	5	4	80%
3.	Vesical calculus	2	1	50%

The drug efficacy is based on the size of calculus are shown in Table – 3

S. No.	Size of the calculus	No. of cases treated	No. of cases cured	Percentage of cured
1.	5mm and below	10	9	90%
2.	6mm to 10mm	8	6	75%
3.	Above 10mm	2	-	-

Gradation of Results Table – 4

S. No.	Results	No. of cases	Percentage
1.	Good	15	75%
2.	Fair	4	20%
3.	Poor	1	5%

BIO STATISTICAL ANALYSIS

Aim

The study subjects and the effectiveness of the drugs were analyzed as Mean, Standard deviation and Percentages. The interpretations were made on the basis of student; test 't' test. The S.P.S.S. package was used for the above analysis and interpretations.

Result and discussions

The study subjects were analysed based on their age and sex. Since the age and sex were independent variable.

Age and Sex

The study subjects selected from the study are 20 in number. Among them 16 are male and 4 are female. They were described by their age and sex as follows.

Age and Sex wise distribution of study subjects shown in Table -1

S.No	Sex	n	Age		't'	significance	95% C.I of the population mean
			Mean	Std.deviation			
1.	Male	16	41.5	19.825	1.703	P>0.05	-
2.	Female	4	23.5	13.429			
3.	Total	20	37.9	19.833	-	-	28.6 to 47.2 years

The above table clearly shows that the mean age of the male clinical trial is 41.5 ± 19.825 years and the female is 23.5 ± 13.429. But the difference in the means age is not statistically signification. Since the 't' value is 1.703 and P>0.05. The mean age of the total study subjects 37.9 ±19.833 years. The mean age of the Kallaidaippu population will be in between 28.6 to 47.2 years based on the estimation from the study subjects.

Effectiveness of the drug

Among 20 clinical trials. Six were affected by the Kalladaippu in both kidneys. The remaining were affected either of the kidneys. The analysis were made by taking the not affected kidney as normal since no calculus was found. After treatment also the calculus was not found in the kidney is also taken as normal and response is good. Because of that reason 20 right and 20 left kidneys were analysis and the results are furnished in the below table.

Distribution of calculus of the study subjects in right and left kidneys of before and after treatment shown in Table-2

S.No	Kidney	n	Calculus before treatment		Calculus after treatment		Mean deference	't'	Significance
			Mean	S.D	Mean	S.D			
1.	Right kidney	20	3.57	2.95	0.55	1.7	3.02	4.43	P<0.00
2.	Left kidney	20	2.71	3.67	1.30	3.2	1.41	2.83	P<0.01

The above table clearly shows the effectiveness of Virahlmeen thalaikal parpam in curing Kalladaippu. The right kidney had a mean size of 3.57 ± 2.95 mm calculus before undergoing the treatment. After the treatment the mean calculus size is 0.55±1.7 mm. The mean reduction is 3.02 ± 3.05mm. The reduction is the effected of the drug since the reduction is highly statistically significant. Similarly the left kidneys of the study subjects are also 1.41 ± 2.22mm of mean reduction is observed. This also statistically significant ($t = 2.83$ and $P<0.01$)

The above interpretation of the effectiveness of the drug was supported by the analysis of response. Among the 20 affected clinical trials 15 cured out percentage and they are treated as good response. This works out to 75% only 4 and 1 study subjects were cured partially and not cured respectively. They are termed as fair and poor. These responses or 20 and 5 percentages of fair and poor respectively.

DISCUSSION

The lithotriptic activity of Virahlmeen thalaikal parpam was studied by clinical, biochemical and pharmacological analysis.

The Biochemical analysis revealed that the test drug contains calcium, chloride, ferrous iron and amino acids.

The Pharmacological analysis inferred that the drug virahlmeen thalaikal parpam possesses significant diuretic and antispasmodic action.

Study of lithotriptic activity indicates that the drug inhibits the growth of the crystals or dissolved the preformed crystals. It is evident that treatment with Virahlmeen thalaikal parpam lowered the levels of serum urea and creatinine in the treatment group when compared with that of positive control.

Virahlmeen thalaikal parpam was given in very small doses and only for a short period of time, it did not cause any adverse effects or any increase in the size of calculi and the symptoms were not aggravated.

Among 20 patients treated with Virahlmeen thalaikal parpam 15 cases (75%) showed good response, 4 cases (20%) showed fair response and 1case (5%) showed poor response.

SUMMARY

- The test drug Virahlmeen thalaikal parpam was selected for this study to establish the lithotriptic, diuretic and antispasmodic actions in the management of Kalladaippu noi.
- From the review of Zoological aspect, the identification of the Channa striatus (Virahlmeen) and removing the stone from that species has been documented.
- The review of Gunapadam arpect from the literature supports the therapeutic efficacy of the drug.
- The Biochemical analysis revealed that the Virahlmeen thalaikal parpam contains calcium, chloride, ferrous iron and aminoacids.
- The Pharmacological analysis revealed that the drug has got significant diuretic, antispasmodic and lithotriptic actions.
- From the clinical assessment, it is inferred that the drug had a good response 75% of cases, fair response in 20% of cases and poor response in 5% of cases. Therefore the test drug is an effective choice in the treatment of Kalladaippu noi.

CONCLUSION

It is concluded that the drug Virahlmeen thalaikal parpam has got significant effect in the treatment of Kalladaippu noi without producing any untoward effects.

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1. Drug: NERUNJIL MUL CHOORANAM /Dose:2gm bd with Honey					Diagnosis : Kalladaippu
O.P.No : 17092	Name : NAINAR	Age/Sex: 59/F	From: 6.3.08	To: 3.4.08	No. of days treated: 35

Complaints and Duration : Loin pain, buring micturition Since 10 days

INVESTIGATIONS

Before Treatment			After Treatment		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,300 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	TC: 9,300cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal.
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:65%	Deposits:		P:62%	Deposits:	**Lt. Kidney:** Normal.
L:30%	NAD	**Lt. Kidney:** Shows 2 calculus measuring 5 mm	L:36%	NAD	
E:5%			E:2%		**UB:**Normal
ESR: ½ Hr:3mm 1 Hr:7mm		**UB: Normal**	ESR: ½ hr:3mm 1hr:6mm		**IMPRESSION:** Normal study
Hb:78%			Hb:80%		
Sugar:82mgs%			Sugar:80mgs%		**OBSERVATION :** GOOD RESPONSE
Urea :19mgs%		**IMPRESSION:** Lt. Renal calculus	Urea: 19mgs%		

2. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu	
O.P.No : 18616	Name : SOWGATH ALI	Age/Sex: 38/M	From: 13.3.08	To: 3.4.08	No. of days treated: 35

Complaints and Duration : Loin to groin pain, burning micturition since 3 months.

INVESTIGATIONS

Before Treatment			After Treatment		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 8,700cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal. There is a calculus 3.5 mm seen in the Rt. ureter	TC:8,700cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:58%	Deposits: NAD.	**Lt. Kidney:** Normal .There is a calculus 3.3 mm seen in the Lt. ureter	P:58%	Deposits: NAD	**Lt. Kidney:** Normal
L:36%			L:38%		
E:6%		**UB:**Normal	E:4%		**UB:** Normal
ESR: ½ Hr:5mm 1 Hr:11mm		**IMPRESSION:** Bilateral ureteric Calculi	ESR: ½ hr:4mm 1hr:9mm		**IMPRESSION:** Normal study
Hb:71%			Hb:74%		
Sugar:102mgs%			Sugar:97mgs%		**OBSERVATION :** GOOD RESPONSE
Urea 16mgs%			Urea: 16mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

3. Drug: NERUNJIL MUL CHOORANAM /Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No :18619	Name : GIFTILIN	Age/Sex:25/M	From: 13.3.08	To: 3.4.08	No. of days treated: 35	
Complaints and Duration : Burning micturition , loin pain since 1 month.						
INVESTIGATIONS						
Before Treatment			After Treatment			
Blood	Urine	Ultrasonogram – abdomen	Blood	Urine	Ultrasonogram – abdomen Response	
TC: 7,800 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	TC:8,100cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P:56%	Deposits: 1-3 Puscells	**Lt. Kidney:** Normal	P:62%	Deposits: NAD	**Lt. Kidney:** Normal	
L:40%	1-2 Epi cells		L:36%			
E:4%		**UB:** Normal	E:2%		**UB:** Normal	
ESR: ½ Hr:3mm 1 Hr:7mm			ESR: ½ hr:3mm 1hr:6mm		**IMPRESSION:** Normal Study	
Hb:75%		**IMPRESSION:** Small Lt. Renal calculus.	Hb:78%			
Sugar:102mgs%		Rt. ureteric calculus	Sugar:102mgs%		**OBSERVATION :** GOOD RESPONSE	
Urea 17mgs%			Urea: 12mgs%			

4. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 18770	Name : NATCHIYAR	Age/Sex: 47/F	From: 13.3.08	To: 3.4.08	No. of days treated: 35	
Complaints and Duration : Burning micturition, back pain since 1 month.						
INVESTIGATIONS						
Before Treatment			After Treatment			
Blood	Urine	Ultrasonogram – abdomen	Blood	Urine	Ultrasonogram – abdomen Response	
TC: 9,700 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows a calculus measuring 5mm seen in the middle calyx	TC:9,700cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P:62%	Deposits: 2-4 puscells	**Lt. Kidney:** Normal	P:65%	Deposits: NAD	**Lt. Kidney:** Normal	
L:36%		**UB:**Normal	L:33%			
E:2%			E:2%		**UB:**Normal	
ESR: ½ Hr:4mm 1 Hr:11mm		**IMPRESSION:** Rt. Renal calculus	ESR: ½ hr:4mm 1hr:9mm		**IMPRESSION:** Normal study	
Hb:80%			Hb:82%		**OBSERVATION :** GOOD RESPONSE	
Sugar:96mgs%			Sugar:90mgs%			
Urea 14mgs%			Urea: 14mgs%			

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

5. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 17009	Name : LINGAN	Age/Sex: 69/m	From:6.3.2008	To: 3.4.2008	No. of days treated: 35	
Complaints and Duration : Pain in the loin (Rt Side), burning micturition since 3 weeks.						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 9,100 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows 12mm calculus seen in the lower pole	TC:9,100cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows 7mm calculus seen in the lower calyx	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P:50%	Deposits : 3-5 pus cells	**Lt. Kidney:** Normal	P:56%	Deposits: NAD	**Lt. Kidney:** Normal	
L:48%	1-3 epicells		L:42%			
E:2%		**UB:** Normal	E:2%		**UB:** Normal	
ESR: ½ Hr:3mm 1 Hr:6mm		**IMPRESSION:** Rt.Intra renal calculus	ESR: ½ hr:3mm 1hr:7mm		**IMPRESSION:** Rt.Renal calculus	
Hb:78%			Hb:80%		**OBSERVATION :** FAIR RESPONSE	
Sugar:(F) 75mgs%			Sugar: 80mgs%			
Urea 26mgs%			Urea: 25mgs%			

6. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 17085	Name : VIJAYAKUMAR	Age/Sex: 42/M	From: 6.3.08	To: 3.4.08	No. of days treated: 35	
Complaints and Duration : Pain in the loin radiating to the groin, burning micturition since 1 month.						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 8,700 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows a small calculus 6mm seen in middle calyx	TC:9,600cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P:58%	Deposits: NAD	**Lt. Kidney:**a Normal	P:60%	Deposits: NAD	**Lt. Kidney:**Normal	
L:38%			L:38%			
E:4%		**UB:**	E:2%		**UB:**Normal	
ESR: ½ Hr:2mm 1 Hr:5mm		**IMPRESSION:** Rt. renal calculus cystitis	ESR: ½ hr:3mm 1hr:5mm		**IMPRESSION:** Normal Study	
Hb:78%			Hb:80%		**OBSERVATION :** GOOD RESPONSE	
Sugar:94mgs%			Sugar:90mgs%			
Urea 22mgs%			Urea: 20mgs%			

Good Response – Significant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

7. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
	O.P.No : 10148	Name : BEEVI JOHN	Age/Sex: 67/F	From: 07.2.2008	To: 20.3.2008	No. of days treated: 49

Complaints and Duration : Loin pain burning micturition since 1 month.

INVESTIGATIONS

Before Treatment			After Treatment		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,000 cells/cumm	Albumin : Nil	**Rt.Kidney:** 5 mm calculus in the upper calyx **Lt. Kidney:** Normal **UB:** Normal **Ureter:** Upper protion-dilated. Lower portion -6mm calculus present **IMPRESSION:** Rt. Lower ureteric calculus Rt.Renal calculus	TC:9,100cells/cumm	Albumin : Nil	**Rt.Kidney:** 4mm calculus calculus seen in the upper calyx **Lt. Kidney:** Normal **UB:** Normal / **Ureter:** Normal **IMPRESSION:** Rt. renal calculus **OBSERVATION :** FAIR RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:60%	Deposits : 2-3 pus cells seen		P:65%	Deposits: NAD	
L:36%			L:30%		
E:4%			E:5%		
ESR: ½ Hr:4mm 1 Hr:8mm			ESR: ½ hr:4mm 1hr:8mm		
Hb:75%			Hb:78%		
Sugar:110mgs%			Sugar: 107mgs%		
Urea 28mgs%			Urea: 26mgs%		

8. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			Diagnosis : Kalladaippu		
O.P.No :13611	Name : SANTHI	Age/Sex:40/F	From: 21.2.2008	To:3.3.08	No. of daystreated:49

Complaints and Duration : Loin pain, burning micturition since 1 month.

INVESTIGATIONS

Before Treatment			After Treatment		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram abdomen Response**
TC: 8,700 cells/cumm	Albumin : Nil	**Rt.Kidney:** 7.5 mm Calculus seen in Rt.ureter at vu junction 4,6mm calculus are noted in upper & lower pole **Lt. Kidney:** 8.4,8.5mm calculus noted in mild and lower pole **UB:** Normal **IMPRESSION:** Bilateral multiple intra renal calculi grade I hydronephrosis of Rt.Kidney due to vu junction calculus.	TC:8,800cells/cumm	Albumin : Nil	**Rt.Kidney:** A calculus measuring 6mm seen in the lower pole **Lt. Kidney:** 4 calculus measuring 5mm Seen in the middle pole Another calculus measuring 9mm seen in the lower calyx. **UB:** Normal **IMPRESSION:** Bilateral Renal Calculi **OBSERVATION :** FAIR RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:65%	Deposits : 1-3 pus cells		P:65%	Deposits: NAD	
L:32%			L:32%		
E:3%			E:2%		
ESR: ½ Hr:4mm 1 Hr:9mm			ESR: ½ hr:4mm 1hr:7mm		
Hb:75%			Hb:78%		
Sugar:98mgs%			Sugar: 98mgs%		
Urea 18mgs%			Urea: 18mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

9. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				**Diagnosis : Kalladaippu**	
O.P.No :13614	**Name : MURUGAN**	**Age/Sex:33/M**	**From: 21.2.08**	**To : 3.4.08**	**No. of daystreated:49**

Complaints and Duration : Loin to groin pain, burning micturition since 1 month.

INVESTIGATIONS

Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,200 cells/cumm	Albumin : Nil	**Rt.Kidney:** shows a small calculus measuring 4mm in size **Lt. Kidney:** shows a small calculus measuring 2.5 mm in size **UB:** Normal **IMPRESSION:** Bilateral renal calculi without obstruction.	TC:8,800cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal, No calculus **Lt. Kidney:** Normal, No calculus **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:58%	Deposits : 2-4 pus cells		P:58%	Deposits: NAD	
L:34%			L:36%		
E:8%			E:6%		
ESR: ½ Hr:4mm 1 Hr:8mm			ESR:½hr:3mm 1hr:7mm		
Hb:76%			Hb:78%		
Sugar:90mgs%			Sugar: 95mgs%		
Urea 25mgs%			Urea: 25mgs%		

10. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No :18727	**Name : NAINAR**	**Age/Sex: 33/M**	**From: 13.3.08**	**To: 10.4.08**	**No. of days treated: 28**

Complaints and Duration :Loin pain, burning micturition, nausea since 50 days.

INVESTIGATIONS

Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 8,200 cells/cumm	Albumin : Trace	**Rt.Kidney:** Shows a calculus measuring 12mm size, seen in the lower pole **Lt. Kidney:** Normal **UB:** Normal **IMPRESSION:** Rt renal calculus	TC:8,800cells/cumm	Albumin : Nil	**Rt.Kidney:** shows a calculus measuring 9 mm size, seen in the lower pole **Lt. Kidney:** Normal, No calculus **UB:** Normal **IMPRESSION:** Rt. Renal calculus **OBSERVATION :** FAIR RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:62%	Deposits : NAD		P:55%	Deposits: NAD	
L:36%			L:42%		
E:2%			E:3%		
ESR: ½ Hr:4mm 1 Hr:9mm			ESR: ½ hr:3mm 1hr:9mm		
Hb:78%			Hb:80%		
Sugar:110mgs%			Sugar: 117mgs%		
Urea 28mgs%			Urea: 26mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

11. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 18622	Name : REGHU	Age/Sex: 25/M	From: 13.3.08	To:3.4.08	No. of days treated: 28	
Complaints and Duration: Back pain, burning micturition since 1 month.						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 7,900 cells/cumm DC: P:65% L:32% E:3% ESR: ½ Hr:5mm 1 Hr:11mm Hb:74% Sugar:96mgs% Urea 17mgs%	Albumin : Nil Sugar :Nil Deposits : 1-5pus cells 2-3 epicells	**Rt.Kidney:** Normal There is a calculus measuring 6x4 mm is size seen in the middle third of the rt. ureter. There is a small calculus measuring 2.5 mm seen in the of Rt. Vesico ureteric junction. **Lt. Kidney:** There is a small calculus measuring 2.5 mm in size seen in the it distal ureter **UB:** Normal **IMPRESSION:** Bilateral ureteric calculi	TC:8,100cells/cumm DC: P:62% L:35% E:3% ESR: ½ hr:4mm 1hr:9mm Hb:75% Sugar: 96mgs% Urea: 16mgs%	Albumin : Nil Sugar :Nil Deposits: NAD	**Rt.Kidney:** Normal, There is a calculus measuring 5x3mm in size seen in the middle third of the rt. ureter. **Lt. Kidney:** Normal, **UB:** Normal **IMPRESSION:** Rt. ureteric calculus **OBSERVATION :** FAIR RESPONSE	

12. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 11809	Name : ESAKKI	Age/Sex: 30/M	From: 14.2.08	To: 20.3.08	No. of days treated: 35	
Complaints and Duration : Loin to groin pain since 1month.						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 8,700 cells/cumm DC: P:62% L:32% E:6% ESR: ½ Hr:4mm 1 Hr:7mm Hb:71% Sugar:95mgs% Urea 16mgs%	Albumin : Nil Sugar :Nil Deposits : Few pus cells seen	**Rt.Kidney:** Normal **Lt. Kidney:** shows a small calculus measuring 6mm in middle calyx **UB:** Normal **IMPRESSION:** Lt renal calculus	TC:8,800cells/ cumm DC: P:64% L:34% E:2% ESR: ½ hr:3mm 1hr:7mm Hb:74% Sugar: 96mgs% Urea: 16mgs%	Albumin : Nil Sugar :Nil Deposits: NAD	**Rt.Kidney:** Normal **Lt. Kidney:** Normal **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE	

Good Response – Significant relief of signs and symptoms. **Poor Response – Insignificant relief of signs and symptoms.**

Fair Response – Partial relief of signs and symptoms.

13. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 17014	**Name : DAVID**	**Age/Sex: 30/M**	**From: 6.3.2008**	**To: 3.4.2008**	**No. of days treated: 36**
Complaints and Duration : Loin to groin pain, burning micturition since 15days.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,100 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	TC:8,800cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal
DC:	Sugar :Nil	**Lt. Kidney:** shows a calculus measuring 6mm seen in the middle calyx	DC:	Sugar :Nil	**Lt. Kidney:** Normal. No calculus
P:55%	Deposits : 1-2 pus cells		P:56%	Deposits: NAD	
L:41%	0-1 epicells		L:42%		**UB:** Normal
E:4%		**UB:** Normal	E:2%		
ESR: ½ Hr:5mm 1 Hr:11mm			ESR: ½ hr:4mm 1hr:7mm		**IMPRESSION:** Normal Study
Hb:73%		**IMPRESSION:** Lt renal calculus	Hb:75%		**OBSERVATION :** GOOD RESPONSE
Sugar:100mgs%			Sugar: 96mgs%		
Urea 24mgs%			Urea: 21mgs%		

14. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 32463	**Name : CHELLADURAI**	**Age/Sex: 62/M**	**From: 22.5.2008**	**To: 19.6.2008**	**No. of days treated: 36**
Complaints and Duration : Back pain, dysuria since 1 month.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,200 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	TC9,100cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal
DC:	Sugar :Nil	**Lt. Kidney:** Multiple small calculus seen	DC:	Sugar :Nil	**Lt. Kidney:** Normal. No calculus
P:48%	Deposits :NAD		P:50%	Deposits: NAD	
L:48%		**UB:** Normal	L:46%		**UB:** Normal
E:4%			E:4%		
ESR: ½ Hr:6mm 1 Hr:12mm		**IMPRESSION:** Lt .Renal calculus	ESR: ½ hr:5mm 1hr:11mm		**IMPRESSION:** Normal Study
Hb:78%			Hb:80%		**OBSERVATION :** GOOD RESPONSE
Sugar:108mgs%			Sugar: 104mgs%		
Urea 20mgs%			Urea: 19mgs%		

Good Response – Significant relief of signs and symptoms. **Poor Response – Insignificant relief of signs and symptoms.**

Fair Response – Partial relief of signs and symptoms.

15. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 17019	**Name : SURESH**	**Age/Sex: 26/M**	**From: 6.3.2008**	**To: 3.4.2008**	**No. of days treated: 36**
Complaints and Duration : Burning micturition, nausea, vomiting since 2 days.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 7,800 cells/cumm	Albumin : Nil	**Rt.Kidney:** shows as mall calculus measuring 4mm is seen in the middle calyx **Lt. Kidney:** Shows a calculus measuring 8mm is seen in the lower calyx **UB:** Normal **IMPRESSION:**Bilateral Renal calculus	TC8,000cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal . No calculus **Lt. Kidney:** Shows a calculus measuring 7mm size seen in the lower calyx. **UB:** Normal **IMPRESSION:** Lt. Renal calculus. **OBSERVATION :** FAIR RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:62%	Deposits :2-3 puscells		P:60%	Deposits: NAD	
L:36%			L:38%		
E:2%			E:2%		
ESR: ½ Hr:5mm 1 Hr:11mm			ESR: ½ hr:4mm 1hr:9mm		
Hb:81%			Hb:82%		
Sugar:104mgs%			Sugar: 101mgs%		
Urea 21mgs%			Urea: 19mgs%		

16. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 17004	**Name : MAHADEVAN**	**Age/Sex: 57/M**	**From: 6.3.2008**	**To: 3.4.2008**	**No. of days treated: 36**
Complaints and Duration : Loin to groin pain since 3 months.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,400 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows a calculus measuring 5mm in the upper calyx **Lt. Kidney:** Normal **UB:** Normal **IMPRESSION:** Rt .Renal calculus	TC9,600cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal . No calculus **Lt. Kidney:** Normal. No calculus **UB:** Normal study **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:58%	Deposits :NAD		P:60%	Deposits: NAD	
L:38%			L:36%		
E:4%			E:4%		
ESR: ½ Hr:4mm 1 Hr:7mm			ESR: ½ hr:3mm 1hr:7mm		
Hb:77%			Hb:79%		
Sugar:96mgs%			Sugar: 94mgs%		
Urea 23mgs%			Urea: 20mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

17. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			Diagnosis : Kalladaippu		
O.P.No : 32452	Name : PARVATHY	Age/Sex: 52/F	From: 22.5.2008	To: 19.6.2008	No. of days treated: 36
Complaints and Duration : Loin to groin pain since 2 months.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 8,000 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** A calculus measuring 7mm seen in the lower calyx **UB:** Normal **IMPRESSION:** Lt .Renal calculus	TC8,100cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:60%	Deposits :1-3 epicells		P:58%	Deposits: NAD	
L:38%			L:36%		
E:2%			E:4%		
ESR: ½ Hr:10mm 1 Hr:22mm			ESR: ½ hr:9mm 1hr:20mm		
Hb:68%			Hb:70%		
Sugar:97mgs%			Sugar: 96mgs%		
Urea 18mgs%			Urea: 18mgs%		

18. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			Diagnosis : Kalladaippu		
O.P.No : 32463	Name : SUDALAIMANI	Age/Sex: 65/M	From: 22.5.2008	To: 19.6.2008	No. of days treated: 36
Complaints and Duration : Back pain, dysuria since 4 months.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 8,800 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** shows a calculus measuring 8 mm seen in the upper pole. **UB:** Normal **IMPRESSION:** Lt .Renal calculus	TC9,000cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Shows a calculus measuring 8.5 mm seen in the upper pole. **UB:** Normal **IMPRESSION:** Lt. Renal calculus **OBSERVATION :** POOR RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:62%	Deposits :few puscells		P:62%	Deposits: NAD	
L:32%			L:34%		
E:6%			E:4%		
ESR: ½ Hr:7mm 1 Hr:15mm			ESR: ½ hr:9mm 1hr:20mm		
Hb:78%			Hb:70%		
Sugar:80mgs%			Sugar: 96mgs%		
Urea 18mgs%			Urea: 18mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

19. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			Diagnosis : Kalladaippu		
O.P.No : 32509	Name : KANAGARAJ	Age/Sex: 35/M	From: 22.5.2008	To: 19.6.2008	No. of days treated: 36
Complaints and Duration : Back pain, dysuria since 20days.					

INVESTIGATIONS

Before Treatment			After Treatment		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 10,400 cells/cumm	Albumin : Nil	**Rt.Kidney:** There are 2 calculs seen in lower pole largest measured 5mm	TC10,400cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal. No calculus
DC:	Sugar :Nil		DC:	Sugar :Nil	**Lt. Kidney:** Normal. No calculus
P:68%	Deposits :1-3 puscells	**Lt. Kidney:** Normal	P:64%	Deposits: NAD	
L:30%	0-2 epicells	**UB:** There is a calculus of 7mm seen.	L:34%		**UB:** Normal
E:2%			E:2%		
ESR: ½ Hr:2mm 1 Hr:4mm		**IMPRESSION:** Rt .Renal calculus. Vesical calculus.	ESR: ½ hr:2mm 1hr:4mm		**IMPRESSION:** Normal Study
Hb:84%			Hb:85%		**OBSERVATION :** GOOD RESPONSE
Sugar:119mgs%			Sugar: 110mgs%		
Urea 32mgs%			Urea: 30mgs%		

20. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			Diagnosis : Kalladaippu		
O.P.No : 33887	Name : ESAKKI	Age/Sex: 43/M	From: 29.5.2008	To: 26.6.2008	No. of days treated: 36
Complaints and Duration : Back pain, occasional burning micturition since 1 week.					

INVESTIGATIONS

Before Treatment			After Treatment		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC:8,700 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	TC8,800cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal
DC:	Sugar :Nil	**Lt. Kidney:** Shows 2 calculus measuring 8 mm seen in lower pole	DC:	Sugar :Nil	**Lt. Kidney:** Shows 2 calculus measuring 8mm seen in lower pole
P:62%	Deposits :1-5 puscells		P:64%	Deposits: 0-2 puscells	
L:36%		**UB:** Normal	L:34%		**UB:** Normal
E:2%			E:2%		
ESR: ½ Hr:4mm 1 Hr:7mm		**IMPRESSION:** Lt .Renal calculus	ESR: ½ hr:4mm 1hr:7mm		**IMPRESSION:** Lt.Renal calculus
Hb:72%			Hb:72%		**OBSERVATION :** POOR RESPONSE
Sugar:98mgs%			Sugar: 100mgs%		
Urea 24mgs%			Urea: 23mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

21. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 32444	Name : ARUNACHALAM	Age/Sex: 58/M	From: 22.5.2008	To:19.6.2008	No. of days treated: 36	
Complaints and Duration : Loin to groin pain since 2 months.						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 7,600 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows a calculus measuring 6 mm **Lt. Kidney:** Shows a calculs measuring 5 mm **UB:** Normal **IMPRESSION:** Bilateral Renal calculus	TC8,100cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal. No calucls **Lt. Kidney:** Normal. No calculus **UB:** Normal **IMPRESSION:** Normal **OBSERVATION :** GOOD RESPONSE	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P:58%	Deposits : few puscells and epicells		P:60%	Deposits: NAD		
L:38%			L:38%			
E:4%			E:2%			
ESR: ½ Hr:2mm 1 Hr:14mm			ESR: ½ hr:2mm 1hr:4mm			
Hb:8%			Hb:82%			
Sugar:104mgs%			Sugar: 101mgs%			
Urea 22mgs%			Urea: 21mgs%			

22. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				Diagnosis : Kalladaippu		
O.P.No : 32452	Name : MURUGESAN	Age/Sex: 31/M	From: 22.5.2008	To: 19.6.2008	No. of days treated: 36	
Complaints and Duration : Back pain, dysuria since 1 month.						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC:8 9,200 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal **UB:** A fairly largest stone measuring 1.5 cm in size seen in the dependent portion. **IMPRESSION:** Vesical calculus	TC9,200cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal. No calculus **UB:** Shows a calculus measuring 1.5 cm seen in dependant portion **IMPRESSION:** Vesical calculus. **OBSERVATION :** POOR RESPONSE	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P:62%	Deposits :few puscells		P:66%	Deposits: NAD		
L:34%			L:32%			
E:4%			E:2%			
ESR: ½ Hr:5mm 1 Hr:11mm			ESR: ½ hr:5mm 1hr:110mm			
Hb:71%			Hb:71%			
Sugar:88mgs%			Sugar: 90mgs%			
Urea 20mgs%			Urea: 20mgs%			

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

23. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 33225	**Name : VANMATHI**	**Age/Sex: 42/F**	**From: 22.5.2008**	**To: 19.6.2008**	**No. of days treated: 36**
Complaints and Duration : Burning micturition, abdominal pain since 1 month.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,700 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal	TC9,400cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal
DC:	Sugar :Nil	**Lt. Kidney:** Normal	DC:	Sugar :Nil	**Lt. Kidney:** Normal.
P:61%	Deposits :1-5 epicells	**UB:** There is a calculus of 6 mm seen in dependent part	P:60%	Deposits: NAD	**UB:** Normal. No calculus
L:36%			L:38%		
E:3%		**IMPRESSION:** Vesical calculus	E:2%		**IMPRESSION:** Normal Study
ESR: ½ Hr:6mm 1 Hr:13mm			ESR: ½ hr:5mm 1hr:11mm		**OBSERVATION :** GOOD RESPONSE
Hb:72%			Hb:75%		
Sugar:107mgs%			Sugar: 100mgs%		
Urea 24mgs%			Urea: 22mgs%		

24. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 33229	**Name : JEYABALAN**	**Age/Sex: 52/M**	**From: 22.5.2008**	**To: 19.6.2008**	**No. of days treated: 36**
Complaints and Duration : Nausea, fever, burning micturition since 14 days.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 7,900 cells/cumm	Albumin : Nil	**Rt.Kidney:** There ls a calculus 7 mm seen in the middle calyx.	TC8,000cells/ cumm	Albumin : Nil	**Rt.Kidney:** shows a calculus measuring 7mm seen in the middle calyx.
DC:	Sugar :Nil	**Lt. Kidney:** Normal	DC:	Sugar :Nil	**Lt. Kidney:** Normal.
P:58%	Deposits :1-3 puscells	**UB:** Normal	P:60%	Deposits: 1-2 puscell	**UB:** Normal
L:40%	1-5 epicells		L:38%		
E:2%		**IMPRESSION:** Rt .Renal calculus	E:2%		**IMPRESSION:** Normal Study
ESR: ½ Hr:7mm 1 Hr:14mm			ESR: ½ hr:6mm 1hr:13mm		**OBSERVATION :** POOR RESPONSE
Hb:75%			Hb:75%		
Sugar:111mgs%			Sugar: 104mgs%		
Urea 17mgs%			Urea: 17mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

25. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 32451	**Name : SARAVANAN**	**Age/Sex: 32/M**	**From: 22.5.2008**	**To: 19.6.2008**	**No. of days treated: 36**
Complaints and Duration : Abdominal pain, dysuria since 2 months					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 10,200 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal, shows a calculus measuring 6mm seen in lower ureter **UB:** Normal **IMPRESSION:** Lt. Ureteric calculus	TC 9,700cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Norma, No calculus **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:58%	Deposits : 2-5 puscells		P:56%	Deposits: NAD	
L:36%			L:42%		
E:6%			E:2%		
ESR: ½ Hr:12mm 1 Hr:25mm			ESR: ½ hr:10mm 1hr: 24mm		
Hb:84%			Hb:85%		
Sugar:120mgs%			Sugar: 115mgs%		
Urea 24mgs%			Urea: 23mgs%		

26. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 32470	**Name : PRABHU**	**Age/Sex: 27/M**	**From: 22.5.2008**	**To: 19.6.2008**	**No. of days treated: 36**
Complaints and Duration : Loin to groin pain, burning micturition since 1 week.					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 9,500 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows a calculus measuring 6 mm seen in the lowyer pole. **Lt. Kidney:** Normal **UB:** Normal **IMPRESSION:** Rt .Renal calculus	TC9,200cells/ Cumm	Albumin : Nil	**Rt.Kidney:** Normal, No calculus. **Lt. Kidney:** Normal. **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:62%	Deposits : NAD		P:50%	Deposits: NAD	
L:36%			L:48%		
E:2%			E:2%		
ESR: ½ Hr:3mm 1 Hr: 7mm			ESR: ½ hr: 3mm 1hr: 5mm		
Hb:81%			Hb:82%		
Sugar: 98mgs%			Sugar: 100mgs%		
Urea 21mgs%			Urea: 20mgs%		

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.

27. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 18620	**Name : RANI**	**Age/Sex: 40/F**	**From: 13.3.2008**	**To: 03.4.2008**	**No. of days treated: 28**
Complaints and Duration : Back pain, dysuria since 20 days					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 8,400 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Shows a calculus measuring 2mm in the lower calyx. **UB:** Normal **IMPRESSION:** Lt .Renal calculus	TC8,100cells/ cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal, No calculus **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:54%	Deposits :0-1 puscells		P:56%	Deposits: NAD	
L:42%			L: 42%		
E:4%			E:2%		
ESR: ½ Hr:4mm 1 Hr: 7mm			ESR: ½ hr:3mm 1hr: 7mm		
Hb:79%			Hb: 80%		
Sugar: 99mgs%			Sugar: 102mgs%		
Urea 21mgs%			Urea: 20mgs%		

28. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey			**Diagnosis : Kalladaippu**		
O.P.No : 17019	**Name : SORNA**	**Age/Sex: 35/F**	**From: 06.3.2008**	**To: 3.4.2008**	**No. of days treated: 35**
Complaints and Duration : Nausea, loin to groin pain since 5 days					
INVESTIGATIONS					
Before Treatment			**After Treatment**		
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**
TC: 10,400 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal, shows a calculus measuring 5 mm seen in the lower ureter. **Lt. Kidney:** Normal **UB:** Normal **IMPRESSION:** Rt .Ureteric calculus	TC10,200cells/ Cumm	Albumin : Nil	**Rt.Kidney:** Normal, No calculus **Lt. Kidney:** Normal. **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE
DC:	Sugar :Nil		DC:	Sugar :Nil	
P:48%	Deposits :1-5 puscells 0-2 epicells		P:52%	Deposits: NAD	
L:46%			L:46%		
E: 6%			E:2%		
ESR: ½ Hr:7mm 1 Hr:15mm			ESR: ½ hr:6mm 1hr:12mm		
Hb:68%			Hb:71%		
Sugar:87mgs%			Sugar: 98mgs%		
Urea 16mgs%			Urea: 16mgs%		

Good Response – Significant relief of signs and symptoms. **Poor Response – Insignificant relief of signs and symptoms.**

Fair Response – Partial relief of signs and symptoms.

29. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				**Diagnosis : Kalladaippu**		
O.P.No : 16999	**Name : KARNA**	**Age/Sex: 32/M**	**From: 6.3.2008**	**To: 3.4.2008**	**No. of days treated: 35**	
Complaints and Duration : Abdominal pain, nausea, fever since 3 days						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 9,600 cells/cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal **UB:** Shows a calculus measuring 6.5mm seen in the dependent part. **IMPRESSION:** Vesical calculus	TC9,800cells/ Cumm	Albumin : Nil	**Rt.Kidney:** Normal **Lt. Kidney:** Normal. **UB:** Normal, No calculus **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P: 50%	Deposits : NAD		P:54%	Deposits: NAD		
L:46%			L:44%			
E:4%			E:2%			
ESR: ½ Hr:3mm 1 Hr: 8mm			ESR: ½ hr:3mm 1hr: 7mm			
Hb:73%			Hb:73%			
Sugar:107mgs%			Sugar: 96mgs%			
Urea 27mgs%			Urea: 26mgs%			

30. Drug: NERUNJIL MUL CHOORANAM/ Dose:2gm bd with Honey				**Diagnosis : Kalladaippu**		
O.P.No : 17025	**Name : SELVA KUMARI**	**Age/Sex: 43/F**	**From: 06.03.2008**	**To: 3.4.2008**	**No. of days treated: 35**	
Complaints and Duration : Dysuria, loin pain since 2 months						
INVESTIGATIONS						
Before Treatment			**After Treatment**			
Blood	**Urine**	**Ultrasonogram – abdomen**	**Blood**	**Urine**	**Ultrasonogram – abdomen Response**	
TC: 8,100 cells/cumm	Albumin : Nil	**Rt.Kidney:** Shows a calculus measuring 4 mm seen in the lower pole. **Lt. Kidney:** Shows a calculus measuring 3mm seen in the middle calyx. **UB:** Normal **IMPRESSION:** Bilateral Renal calculus	TC8,300cells/ Cumm	Albumin : Nil	**Rt.Kidney:** Normal, No calculus **Lt. Kidney:** Normal. **UB:** Normal **IMPRESSION:** Normal Study **OBSERVATION :** GOOD RESPONSE	
DC:	Sugar :Nil		DC:	Sugar :Nil		
P: 63%	Deposits :1-3 epicells		P:60%	Deposits: NAD		
L: 35%			L:38%			
E:2%			E:2%			
ESR: ½ Hr: 11mm 1 Hr: 24mm			ESR: ½ hr: 10mm 1hr: 20mm			
Hb: 69%			Hb:70%			
Sugar: 98mgs%			Sugar: 103mgs%			
Urea 24mgs%			Urea: 23mgs%			

Good Response – Significant relief of signs and symptoms.

Poor Response – Insignificant relief of signs and symptoms.

Fair Response – Partial relief of signs and symptoms.